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Characteristics of Doctoral Scientists and Engineers in the United States: 1993

Detailed Statistical Tables

Division of Science Resources Studies
Directorate for Social, Behavioral and Economic Sciences

National Science Foundation

NSF 96-302

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Characteristics of Doctoral Scientists and Engineers in the United States: 1993

Detailed Statistical Tables

R. Keith Wilkinson, Project Officer

Division of Science Resources Studies
Directorate for Social, Behavioral and Economic Sciences

National Science Foundation

NSF 96-302

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SECTION I. GENERAL NOTES

In this report, data are presented on the demographic and employment characteristics of the Nation's doctoral scientists and engineers. The data were developed as part of the Longitudinal Doctorate Project.[1] Current information on the supply and utilization of doctoral personnel in science and engineering reflects the results of the 1993 Survey of Doctorate Recipients (SDR), the eleventh in a biennial series. The population of the 1993 survey includes persons under the age of 76 who hold doctorates in science or engineering from U.S. institutions.

In 1993, the SDR content and instrument went through a major redesign. The survey instrument, i.e., the wording and structure of the questions, changed greatly between 1991 and 1993. The format and layout of the questionnaires were changed to a more "respondent friendly" design to improve data quality. The survey instrument was expanded from eight pages to twenty pages.

The survey content was also enhanced in 1993. New questions were added to gather information on such topics as degrees earned since receipt of the first doctorate, relationship of degree to current job, and reasons for making job changes. The sections on current employment and demographic characteristics were expanded and revised to improve validity. The concept of "employment field" was replaced by "occupation," allowing the analysis of the relationship of education and outcomes (occupation).

Because of these changes, only data from the 1993 survey are included in this report. Information is provided on the number of employed scientists and engineers by demographic characteristics such as citizenship, place of birth, and field of degree, and employment-related characteristics such as occupation, sector of employment, median salary, and various labor force rates. Of further note, some tables in this report include estimates for doctoral scientists and engineers employed in 4-year colleges and universities.

In addition to this section on General Notes, this report includes Detailed Statistical Tables, Technical Notes, and the Survey Instrument. The Detailed Statistical Tables unit includes employment and salary detail tables. The Technical Notes section contains information on survey methodology, coverage, concepts, definitions, and sampling errors.

Requests for additional information should be directed to R. Keith Wilkinson, Science and Engineering Personnel Program, Division of Science Resources Studies, National Science Foundation, Washington, D.C. 20550. Telephone: (703)306-1776.

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[1] The Longitudinal Doctorate Project consists of the Survey of Doctorate Recipients, a biennial survey conducted since 1973, and the Doctorate Work History File, a longitudinal file of data from the surveys.

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Field of doctorate	Total	Employed				Unemployed/ seeking	Retired	Not empl'd/ not seeking
		Total	Full-time	Part-time	Posdoc appt			
Total	513,460	462,870	415,990	29,000	17,870	7,640	34,670	8,290
Sciences	431,890	387,740	345,330	25,840	16,580	6,320	30,220	7,610
Computer and mathematical sciences	29,720	27,940	26,620	1,080	240	320	1,220	240
Computer and information sciences	5,190	5,140	4,960	90	90	50	S	S
Mathemathical sciences	24,530	22,800	21,660	990	160	270	1,220	240
Life and related sciences	139,460	124,580	107,890	6,310	10,390	1,870	10,100	2,900
Agricultural and food sciences	17,450	15,100	13,340	940	820	290	1,830	230
Biological and health sciences	117,660	105,630	90,850	5,230	9,560	1,550	7,850	2,630
Environmental sciences	4,340	3,850	3,700	140	S	S	420	S
Physical and related sciences	112,170	98,530	88,670	4,880	4,990	2,120	9,910	1,600
Chemistry, except biochemistry	59,740	51,760	46,880	2,570	2,310	950	6,170	870
Geology and oceanography	14,320	12,500	11,190	760	550	380	1,190	250
Physics and astronomy	36,950	33,150	29,620	1,530	2,000	780	2,540	480
Other physical sciences(incl. earth)	1,150	1,120	980	S	130	S	S	S
Social and related sciences	150,540	136,680	122,160	13,570	980	2,000	9,000	2,860
Economics	21,850	19,410	18,150	1,190	80	280	1,990	170
Political and related sciences	16,000	14,290	13,560	690	50	290	1,190	230
Psychology	77,080	71,020	61,070	9,260	690	930	3,510	1,620
Sociology and anthropology	22,210	19,790	18,000	1,680	120	320	1,500	600
Other social sciences	13,410	12,170	11,380	770	S	180	820	240
Engineering	81,570	75,120	70,660	3,160	1,300	1,310	4,450	680
Aerospace/aeronautical	3,380	3,050	2,840	150	60	70	210	50
Chemical	12,290	11,140	10,560	490	90	200	810	140
Civil	7,270	7,080	6,750	260	60	S	160	S
Electrical/computer	21,010	19,410	18,440	780	180	370	990	240
Industrial	2,040	1,900	1,830	60	S	60	80	S
Mechanical	10,090	9,470	8,810	360	290	100	420	100
Other engineering	25,490	23,100	21,430	1,050	620	480	1,780	130

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 2. Doctoral scientists and engineers, by occupation and employment status: 1993

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Occupation*	Total	Employed				Unemployed/ seeking	Retired	Not empl'd/ not seeking
		Total	Full-time	Part-time	Posdoc appt			
Total	513,460	462,870	415,990	29,000	17,870	7,640	34,670	8,290
Scientists	298,090	267,070	232,970	18,100	16,000	4,290	21,660	5,060
Computer and mathematical scientists	37,050	34,440	32,510	1,630	300	740	1,530	340
Computer and information scientists	12,690	11,810	11,160	510	150	480	280	110
Mathematical scientists	5,970	5,140	4,630	360	150	170	510	160
Postsecondary teachers, computer and mathematical sciences	18,390	17,490	16,720	770	S	90	740	70
Life and related scientists	92,180	80,960	66,470	3,470	11,020	1,150	8,070	2,000
Agricultural scientists	9,150	7,500	6,380	460	660	160	1,360	120
Biological scientists	49,270	43,430	31,380	1,850	10,190	830	3,690	1,320
Forestry and conservation scientists	1,080	820	730	90	S	S	230	S
Postsecondary teachers, life and related sciences	32,690	29,220	27,980	1,060	170	150	2,800	520
Physical and related scientists	72,830	63,660	56,610	2,940	4,110	1,370	6,620	1,170
Chemists, except biochemists	24,910	21,210	18,870	700	1,650	520	2,690	490
Earth scientists	8,820	7,610	6,650	370	580	290	770	160
Physicists and astronomers	14,240	12,610	10,330	540	1,730	350	1,060	230
Other physical scientists	1,660	1,470	1,270	70	140	S	110	50
Postsecondary teachers, physical and related sciences	23,190	20,760	19,490	1,270	S	180	1,990	250
Social and related scientists	96,030	88,000	77,370	10,060	570	1,040	5,440	1,540
Economists	6,140	5,360	4,900	390	70	160	590	S
Political scientists	1,280	820	720	110	S	60	380	S
Psychologists	39,530	37,370	30,040	6,960	360	330	1,220	610
Sociologists and anthropologists	3,350	2,470	2,090	300	80	90	550	230
S&T historians and other social scientists	2,030	1,720	1,520	160	S	S	170	110
Postsecondary teachers, social and related sciences	43,710	40,260	38,100	2,130	S	380	2,520	550
Engineers	61,570	55,550	51,700	2,680	1,180	1,070	4,410	550
Aerospace and related engineers	3,500	3,150	2,940	140	70	110	160	70
Chemical engineers	6,420	5,610	5,210	330	70	140	540	120
Civil and architectural engineers	2,710	2,460	2,270	130	70	S	230	S
Electric and related engineers	10,300	9,270	8,820	290	160	200	670	160
Industrial engineers	440	350	340	S	S	S	60	S
Mechanical engineers	5,590	5,090	4,610	240	240	90	400	S
Other engineers	15,830	13,960	12,430	970	560	380	1,370	110
Postsecondary teachers, engineering	16,790	15,660	15,070	580	S	100	980	50
Non-S&E occupations	153,800	140,240	131,330	8,220	690	2,270	8,600	2,680
Managers, administrators, etc.	96,650	90,400	88,030	2,250	120	870	4,610	770
Health and related occupations	13,890	12,570	11,130	1,050	400	270	750	290
Teachers, except S&E postsecondary teachers	18,500	16,150	14,810	1,310	S	310	1,540	500
Social services and related occupations	1,950	1,660	1,350	320	S	S	90	160
Technologists, etc.	5,460	4,820	4,280	430	110	180	320	130
Sales and marketing occupations	5,000	4,490	3,850	640	S	130	300	80
Other non-S&E occupations	12,360	10,140	7,880	2,240	30	480	990	750

*If the respondent was unemployed, occupation of last job was reported.

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible] doctorates by broad field of doctorate, employment status and sex: 1993

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Employment status/field of doctorate	Total	Male	Female
All Fields:			
Total	513,460	410,190	103,270
Employed full-time	433,330	352,530	80,800
Employed part-time	29,540	16,730	12,810
Unemployed, seeking	7,640	5,960	1,680
Retired	34,670	31,220	3,450
Not employed, not seeking	8,290	3,760	4,530
Sciences:			
Total	431,890	332,090	99,800
Employed full-time	361,410	283,540	77,870
Employed part-time	26,340	13,800	12,540
Unemployed, seeking	6,320	4,720	1,600
Retired	30,220	26,800	3,420
Not employed, not seeking	7,610	3,230	4,370
Computer and mathematical sciences:			
Total	29,720	26,070	3,660
Employed full-time	26,840	23,820	3,020
Employed part-time	1,100	740	360
Unemployed, seeking	320	280	50
Retired	1,220	1,100	110
Not employed, not seeking	240	130	110
Life and related sciences:			
Total	139,460	103,750	35,710
Employed full-time	118,030	89,070	28,960
Employed part-time	6,560	3,530	3,030
Unemployed, seeking	1,870	1,300	570
Retired	10,100	8,720	1,380
Not employed, not seeking	2,900	1,130	1,780
Physical and related sciences:			
Total	112,170	100,830	11,340
Employed full-time	93,520	84,660	8,860
Employed part-time	5,020	4,040	980
Unemployed, seeking	2,120	1,800	330
Retired	9,910	9,370	530
Not employed, not seeking	1,600	950	650
Social and related sciences:			
Total	150,540	101,450	49,090
Employed full-time	123,020	85,980	37,030
Employed part-time	13,670	5,500	8,170
Unemployed, seeking	2,000	1,350	650
Retired	9,000	7,600	1,400
Not employed, not seeking	2,860	1,020	1,840

See explanatory information and SOURCE at end of table.

Table [illegible]. Doctoral scientists and engineers, by broad field of doctorate, employment status, and sex: 1993

Page 2 of 2

Employment status/field of doctorate	Total	Male	Female
Engineering:			
Total	81,570	78,100	3,470
Employed full-time	71,920	69,000	2,930
Employed part-time	3,200	2,930	270
Unemployed, seeking	1,310	1,230	80
Retired	4,450	4,420	S
Not employed, not seeking	680	520	160

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible]

Page 1 of 2

Employment status/occupation*	Total	Male	Female
All Occupations			
Total	513,460	410,190	103,270
Employed full-time	433,330	352,530	80,800
Employed part-time	29,540	16,730	12,810
Unemployed, seeking	7,640	5,960	1,680
Retired	34,670	31,220	3,450
Not employed, not seeking	8,290	3,760	4,530
Scientists:			
Total	298,090	230,630	67,460
Employed full-time	248,510	196,670	51,850
Employed part-time	18,560	9,140	9,420
Unemployed, seeking	4,290	3,220	1,070
Retired	21,660	19,550	2,110
Not employed, not seeking	5,060	2,050	3,010
Computer and mathematical scientists:			
Total	37,050	32,400	4,650
Employed full-time	32,780	29,040	3,750
Employed part-time	1,660	1,220	430
Unemployed, seeking	740	620	120
Retired	1,530	1,380	150
Not employed, not seeking	340	140	210
Life and related scientists:			
Total	92,180	70,260	21,920
Employed full-time	77,190	59,290	17,900
Employed part-time	3,770	2,210	1,560
Unemployed, seeking	1,150	740	400
Retired	8,070	7,170	900
Not employed, not seeking	2,000	850	1,160
Physical and related scientists:			
Total	72,830	65,130	7,700
Employed full-time	60,610	54,760	5,850
Employed part-time	3,050	2,250	800
Unemployed, seeking	1,370	1,170	200
Retired	6,620	6,310	320
Not employed, not seeking	1,170	640	540
Social and related scientists:			
Total	96,030	62,840	33,190
Employed full-time	77,920	53,570	24,350
Employed part-time	10,080	3,460	6,630
Unemployed, seeking	1,040	680	360
Retired	5,440	4,700	740
Not employed, not seeking	1,540	430	1,110

See explanatory information and SOURCE at end of table.

Table 2. Estimates of scientists and engineers, by broad occupation, employment status, and sex: 1993

Page 2 of 2

Employment status/occupation*	Total	Male	Female
Engineers:			
Total	61,570	58,280	3,300
Employed full-time	52,860	50,000	2,850
Employed part-time	2,700	2,500	190
Unemployed, seeking	1,070	960	110
Retired	4,410	4,350	60
Not employed, not seeking	550	460	90
Non-S&E occupations:			
Total	153,800	121,280	32,520
Employed full-time	131,960	105,860	26,100
Employed part-time	8,280	5,080	3,200
Unemployed, seeking	2,270	1,780	500
Retired	8,600	7,310	1,280
Not employed, not seeking	2,680	1,250	1,440

*If the respondent was unemployed, occupation of last job was reported.

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table [illegible] Doctoral scientists and engineers, by field of doctorate, employment status, [illegible] and race/ethnicity, 1993

Page 1 of 2

Employment status/field of doctorate	Total	White	Black	Hispanic	Asian or Pacific Islander	Native American
All Fields:						
Total	513,460	436,820	10,140	10,040	54,590	1,870
Employed full-time	433,330	363,720	9,180	8,880	49,900	1,650
Employed part-time	29,540	26,710	440	540	1,770	80
Unemployed, seeking	7,640	6,270	130	180	1,000	50
Retired	34,670	32,980	230	300	1,110	60
Not employed, not seeking	8,290	7,140	150	150	820	S
Sciences:						
Total	431,890	377,910	9,090	8,590	34,610	1,700
Employed full-time	361,410	313,090	8,250	7,610	30,970	1,480
Employed part-time	26,340	23,980	390	440	1,450	80
Unemployed, seeking	6,320	5,360	90	140	680	50
Retired	30,220	28,870	220	250	810	60
Not employed, not seeking	7,610	6,610	140	140	700	S
Computer and mathematical sciences:						
Total	29,720	24,060	400	770	4,420	70
Employed full-time	26,840	21,570	400	730	4,080	70
Employed part-time	1,100	920	S	S	160	S
Unemployed, seeking	320	250	S	S	80	S
Retired	1,220	1,130	S	S	60	S
Not employed, not seeking	240	190	S	S	S	S
Life and related sciences:						
Total	139,460	122,320	2,580	2,400	11,690	470
Employed full-time	118,030	102,860	2,320	2,090	10,380	370
Employed part-time	6,560	5,940	70	60	480	S
Unemployed, seeking	1,870	1,570	S	90	180	S
Retired	10,100	9,480	100	110	360	50
Not employed, not seeking	2,900	2,470	80	S	310	S
Physical and related sciences:						
Total	112,170	96,050	1,110	1,930	12,790	290
Employed full-time	93,520	78,730	1,020	1,820	11,670	280
Employed part-time	5,020	4,450	S	50	500	S
Unemployed, seeking	2,120	1,830	S	S	260	S
Retired	9,910	9,710	S	S	160	S
Not employed, not seeking	1,600	1,320	S	S	210	S

See explanatory information and SOURCE at end of table.

[illegible] field of doctorate [illegible] 1993

Page 2 of 2

Employment status/field of doctorate	Total	White	Black	Hispanic	Asian or Pacific Islander	Native American
Social and related sciences:						
Total	150,540	135,490	5,000	3,480	5,710	870
Employed full-time	123,020	109,930	4,520	2,980	4,840	750
Employed part-time	13,670	12,680	300	310	340	50
Unemployed, seeking	2,000	1,720	S	S	180	50
Retired	9,000	8,540	110	90	230	S
Not employed, not seeking	2,880	2,620	S	60	140	S
Engineering:						
Total	81,570	58,900	1,050	1,460	19,980	180
Employed full-time	71,920	50,630	930	1,270	18,930	170
Employed part-time	3,200	2,720	60	100	320	S
Unemployed, seeking	1,310	910	50	S	310	S
Retired	4,450	4,110	S	S	300	S
Not employed, not seeking	680	540	S	S	120	S

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table [illegible]. Doctoral scientists and engineers, by occupation, employment status, and race/ethnicity, 1993

Page 1 of 2

Employment status/occupation*	Total	White	Black	Hispanic	Asian or Pacific Islander	Native American
All Occupations						
Total	513,460	436,820	10,140	10,040	54,590	1,870
Employed full-time	433,330	363,720	9,180	8,880	49,900	1,650
Employed part-time	29,540	26,710	440	540	1,770	80
Unemployed, seeking	7,640	6,270	130	180	1,000	50
Retired	34,670	32,980	230	300	1,110	60
Not employed, not seeking	8,290	7,140	150	150	820	S
Scientists:						
Total	298,090	258,160	5,600	6,240	26,890	1,190
Employed full-time	248,510	212,580	5,070	5,480	24,330	1,070
Employed part-time	18,560	16,950	270	360	940	S
Unemployed, seeking	4,290	3,570	70	100	510	50
Retired	21,660	20,680	130	200	640	S
Not employed, not seeking	5,060	4,420	70	100	470	S
Computer and mathematical scientists:						
Total	37,050	29,640	540	890	5,880	100
Employed full-time	32,780	25,900	510	790	5,490	100
Employed part-time	1,680	1,380	S	60	210	S
Unemployed, seeking	740	610	S	S	80	S
Retired	1,530	1,430	S	S	70	S
Not employed, not seeking	340	310	S	S	S	S
Life and related scientists:						
Total	92,180	79,970	1,280	1,620	9,060	250
Employed full-time	77,190	66,300	1,120	1,450	8,120	210
Employed part-time	3,770	3,420	50	S	280	S
Unemployed, seeking	1,150	870	S	60	200	S
Retired	8,070	7,630	60	80	260	S
Not employed, not seeking	2,000	1,740	S	S	200	S
Physical and related scientists:						
Total	72,830	61,870	880	1,430	8,450	200
Employed full-time	60,610	50,590	800	1,300	7,730	190
Employed part-time	3,050	2,710	S	50	260	S
Unemployed, seeking	1,370	1,180	S	S	170	S
Retired	6,620	6,450	S	S	130	S
Not employed, not seeking	1,170	940	S	S	160	S

See explanatory information and SOURCE at end of table.

Table [illegible]. Doctoral scientists and engineers, by occupation, employment status, and race/ethnicity, 1993

Page 2 of 2

Employment status/occupation*	Total	White	Black	Hispanic	Asian or Pacific Islander	Native American
Social and related scientists:						
Total	96,030	86,680	2,900	2,300	3,500	650
Employed full-time	77,920	69,760	2,640	1,950	3,000	570
Employed part-time	10,080	9,440	190	230	180	S
Unemployed, seeking	1,040	900	S	S	70	S
Retired	5,440	5,150	50	70	180	S
Not employed, not seeking	1,540	1,430	S	S	80	S
Engineers:						
Total	61,570	44,120	720	1,120	15,480	130
Employed full-time	52,860	36,620	650	970	14,510	120
Employed part-time	2,700	2,340	S	50	260	S
Unemployed, seeking	1,070	750	S	60	230	S
Retired	4,410	4,010	S	S	350	S
Not employed, not seeking	550	400	S	S	130	S
Non-S&E occupations:						
Total	153,800	134,540	3,810	2,680	12,200	550
Employed full-time	131,960	114,540	3,470	2,430	11,060	460
Employed part-time	8,280	7,420	130	130	570	S
Unemployed, seeking	2,270	1,950	50	S	260	S
Retired	8,600	8,310	90	50	110	S
Not employed, not seeking	2,680	2,330	70	50	220	S

*If the respondent was unemployed, occupation of last job was reported.

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible] Selected employment characteristics of doctoral scientists and engineers by field of doctorate: 1993

[In percent]

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Field of doctorate	Unemployment rate	Involuntarily out-of-field rate	Labor force participation rate
Total	1.6	4.3	91.6
Sciences	1.6	4.5	91.2
Computer and mathematical sciences	1.1	3.6	95.1
Computer and information sciences	1.0	1.3	100.0
Mathemathical sciences	1.2	4.1	94.1
Life and related sciences	1.5	3.5	90.7
Agricultural and food sciences	1.9	3.2	88.2
Biological and health sciences	1.4	3.5	91.1
Environmental sciences	S	5.4	89.4
Physical and related sciences	2.1	6.1	89.7
Chemistry, except biochemistry	1.8	4.8	88.2
Geology and oceanography	3.0	6.3	90.0
Physics and astronomy	2.3	8.2	91.8
Other physical sciences(incl. earth)	S	S	99.1
Social and related sciences	1.4	4.4	92.1
Economics	1.4	1.6	90.1
Political and related sciences	2.0	4.7	91.2
Psychology	1.3	3.5	93.4
Sociology and anthropology	1.6	8.1	90.6
Other social sciences	1.5	7.6	92.1
Engineering	1.7	3.6	93.7
Aerospace/aeronautical	2.2	2.9	92.4
Chemical	1.8	2.2	92.3
Civil	S	0.9	97.7
Electrical/computer	1.9	4.3	94.1
Industrial	2.9	5.2	95.6
Mechanical	1.0	5.0	94.8
Other engineering	2.1	3.8	92.5

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible] employment characteristics of doctoral scientists and engineers [illegible]

[In percent]

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Occupation*	Unemployment rate	Involuntarily out-of-field rate	Labor force participation rate
Total	1.6	4.3	91.6
Scientists	1.6	2.9	91.0
Computer and mathematical scientists	2.1	7.3	94.9
Computer and information scientists	3.9	16.2	96.9
Mathematical scientists	3.1	5.6	88.9
Postsecondary teachers, computer and mathematical sciences	0.5	1.8	95.6
Life and related scientists	1.4	1.6	89.1
Agricultural scientists	2.2	1.5	83.8
Biological scientists	1.9	1.9	89.8
Forestry and conservation scientists	S	S	76.3
Postsecondary teachers, life and related sciences	0.5	1.1	89.8
Physical and related scientists	2.1	3.2	89.3
Chemists, except biochemists	2.4	2.6	87.3
Earth scientists	3.6	2.8	89.5
Physicists and astronomers	2.7	3.1	90.9
Other physical scientists	S	3.6	90.5
Postsecondary teachers, physical and related sciences	0.9	3.9	90.3
Social and related scientists	1.2	2.2	92.7
Economists	2.8	1.1	89.9
Political scientists	6.7	S	89.0
Psychologists	0.9	2.5	95.4
Sociologists and anthropologists	3.6	4.1	76.7
S&T historians and other social scientists	S	4.5	86.2
Postsecondary teachers, social and related sciences	0.9	1.8	93.0
Engineers	1.9	4.4	92.0
Aerospace and related engineers	3.5	4.7	93.3
Chemical engineers	2.5	2.0	89.7
Civil and architectural engineers	S	S	91.4
Electric and related engineers	2.1	7.8	92.0
Industrial engineers	S	S	83.9
Mechanical engineers	1.7	6.0	92.7
Other engineers	2.7	6.1	90.6
Postsecondary teachers, engineering	0.6	1.4	93.8
Non-S&E occupations	1.6	7.1	92.7
Managers, administrators,etc.	1.0	4.2	94.4
Health and related occupations	2.1	8.6	92.5
Teachers, except S&E postsecondary teachers	1.9	4.4	89.0
Social services and related occupations	S	13.8	86.8
Technologists, etc.	3.7	17.4	91.8
Sales and marketing occupations	2.9	20.9	92.5
Other non-S&E occupations	4.5	23.5	85.9

*If the respondent was unemployed, occupation of last job was reported.

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible]

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Field of doctorate	Total	Male	Female
Total	513,460	410,190	103,270
Sciences	431,890	332,090	99,800
Computer and mathematical sciences	29,720	26,070	3,660
Computer and information sciences	5,190	4,400	790
Mathemathical sciences	24,530	21,670	2,870
Life and related sciences	139,460	103,750	35,710
Agricultural and food sciences	17,450	15,370	2,090
Biological and health sciences	117,680	84,360	33,300
Environmental sciences	4,340	4,020	330
Physical and related sciences	112,170	100,830	11,340
Chemistry, except biochemistry	59,740	52,130	7,610
Geology and oceanography	14,320	12,820	1,500
Physics and astronomy	36,950	34,940	2,020
Other physical sciences(incl. earth)	1,150	930	210
Social and related sciences	150,540	101,450	49,090
Economics	21,850	19,070	2,780
Political and related sciences	16,000	13,130	2,870
Psychology	77,080	46,060	31,020
Sociology and anthropology	22,210	14,030	8,170
Other social sciences	13,410	9,160	4,250
Engineering	81,570	78,100	3,470
Aerospace/aeronautical	3,380	3,330	S
Chemical	12,290	11,730	560
Civil	7,270	7,040	230
Electrical/computer	21,010	20,300	710
Industrial	2,040	1,770	270
Mechanical	10,090	9,800	290
Other engineering	25,490	24,130	1,360

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible]

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Occupation*	Total	Male	Female
Total	513,460	410,190	103,270
Scientists	298,090	230,630	67,460
Computer and mathematical scientists	37,050	32,400	4,650
Computer and information scientists	12,690	11,250	1,440
Mathematical scientists	5,970	5,040	930
Postsecondary teachers, computer and mathematical sciences	18,390	16,120	2,280
Life and related scientists	92,180	70,260	21,920
Agricultural scientists	9,150	8,060	1,090
Biological scientists	49,270	35,230	14,040
Forestry and conservation scientists	1,080	930	140
Postsecondary teachers, life and related sciences	32,690	26,030	6,650
Physical and related scientists	72,830	65,130	7,700
Chemists, except biochemists	24,910	21,670	3,240
Earth scientists	8,820	8,010	810
Physicists and astronomers	14,240	13,350	890
Other physical scientists	1,660	1,460	200
Postsecondary teachers, physical and related sciences	23,190	20,640	2,550
Social and related scientists	96,030	62,840	33,190
Economists	6,140	4,900	1,240
Political scientists	1,280	1,030	250
Psychologists	39,530	21,750	17,770
Sociologists and anthropologists	3,350	2,020	1,330
S&T historians and other social scientists	2,030	1,270	760
Postsecondary teachers, social and related sciences	43,710	31,870	11,850
Engineers	61,570	58,280	3,300
Aerospace and related engineers	3,500	3,430	80
Chemical engineers	6,420	6,040	380
Civil and architectural engineers	2,710	2,620	90
Electric and related engineers	10,300	9,890	410
Industrial engineers	440	400	S
Mechanical engineers	5,590	5,450	140
Other engineers	15,830	14,430	1,390
Postsecondary teachers, engineering	16,790	16,020	770
Non-S&E occupations	153,800	121,280	32,520
Managers, administrators,etc.	96,650	81,700	14,950
Health and related occupations	13,890	9,400	4,490
Teachers, except S&E postsecondary teachers	18,500	10,820	7,680
Social services and related occupations	1,950	1,270	680
Technologists, etc.	5,460	4,820	630
Sales and marketing occupations	5,000	4,170	830
Other non-S&E occupations	12,360	9,100	3,260

*If the respondent was unemployed, occupation of last job was reported.

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible] scientists and engineers by field of doctorate and race/ethnicity, 1993

Page 1 of 1

Field of doctorate	Total	White	Black	Hispanic	Asian or Pacific Islander	Native American
Total	513,460	436,820	10,140	10,040	54,590	1,870
Sciences	431,890	377,910	9,090	8,590	34,610	1,700
Computer and mathematical sciences	29,720	24,060	400	770	4,420	70
Computer and information sciences	5,190	3,580	70	160	1,370	S
Mathemathical sciences	24,530	20,480	330	620	3,040	60
Life and related sciences	139,460	122,320	2,580	2,400	11,690	470
Agricultural and food sciences	17,450	15,070	250	330	1,760	S
Biological and health sciences	117,660	103,160	2,300	2,020	9,790	380
Environmental sciences	4,340	4,090	S	S	140	50
Physical and related sciences	112,170	96,050	1,110	1,930	12,790	290
Chemistry, except biochemistry	59,740	50,380	800	1,170	7,200	190
Geology and oceanography	14,320	13,240	S	200	820	S
Physics and astronomy	36,950	31,390	270	560	4,670	70
Other physical sciences(incl. earth)	1,150	1,030	S	S	100	S
Social and related sciences	150,540	135,490	5,000	3,480	5,710	870
Economics	21,850	18,920	580	460	1,830	60
Political and related sciences	16,000	14,120	740	260	780	100
Psychology	77,080	71,300	2,350	1,760	1,270	410
Sociology and anthropology	22,210	19,910	830	590	710	180
Other social sciences	13,410	11,240	500	420	1,120	130
Engineering	81,570	58,900	1,050	1,460	19,980	180
Aerospace/aeronautical	3,380	2,690	60	60	580	S
Chemical	12,290	9,000	90	240	2,970	S
Civil	7,270	5,040	140	130	1,940	S
Electrical/computer	21,010	14,900	290	420	5,330	70
Industrial	2,040	1,540	S	S	440	S
Mechanical	10,090	6,870	150	180	2,860	S
Other engineering	25,490	18,870	300	410	5,860	60

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible]

Page 1 of 2

Occupation*	Total	White	Black	Hispanic	Asian or Pacific Islander	Native American
Total	513,460	436,820	10,140	10,040	54,590	1,870
Scientists	298,090	258,160	5,600	6,240	26,890	1,190
Computer and mathematical scientists	37,050	29,640	540	890	5,880	100
Computer and information scientists	12,690	9,860	140	240	2,400	S
Mathematical scientists	5,970	4,870	70	100	920	S
Postsecondary teachers, computer and mathematical sciences	18,390	14,910	320	550	2,550	60
Life and related scientists	92,180	79,970	1,280	1,620	9,060	250
Agricultural scientists	9,150	8,130	60	170	760	S
Biological scientists	49,270	41,200	630	940	6,350	140
Forestry and conservation scientists	1,080	1,030	S	S	S	S
Postsecondary teachers, life and related sciences	32,690	29,610	580	520	1,920	60
Physical and related scientists	72,830	61,870	880	1,430	8,450	200
Chemists, except biochemists	24,910	20,250	340	450	3,830	S
Earth scientists	8,820	8,050	S	170	580	S
Physicists and astronomers	14,240	11,910	140	230	1,950	S
Other physical scientists	1,660	1,260	S	S	370	S
Postsecondary teachers, physical and related sciences	23,190	20,400	400	540	1,730	120
Social and related scientists	96,030	86,680	2,900	2,300	3,500	650
Economists	6,140	5,170	160	170	630	S
Political scientists	1,280	1,180	S	S	S	S
Psychologists	39,530	36,900	910	980	560	190
Sociologists and anthropologists	3,350	2,990	90	110	140	S
S&T historians and other social scientists	2,030	1,880	S	S	100	S
Postsecondary teachers, social and related sciences	43,710	38,570	1,700	1,020	2,060	370
Engineers	61,570	44,120	720	1,120	15,480	130
Aerospace and related engineers	3,500	2,380	50	S	1,040	S
Chemical engineers	6,420	4,520	80	120	1,700	S
Civil and architectural engineers	2,710	1,690	S	60	910	S
Electric and related engineers	10,300	6,770	80	130	3,260	60
Industrial engineers	440	280	S	S	150	S
Mechanical engineers	5,590	3,460	S	90	2,000	S
Other engineers	15,830	11,810	140	230	3,640	S
Postsecondary teachers, engineering	16,790	13,210	310	450	2,770	50

See explanatory information and SOURCE at end of table.

[illegible] scientists and engineers [illegible]
and race/ethnicity, 1993

Page 2 of 2

Occupation*	Total	White	Black	Hispanic	Asian or Pacific Islander	Native American
Non-S&E occupations	153,800	134,540	3,810	2,680	12,220	550
Managers, administrators,etc.	96,650	85,040	2,350	1,650	7,200	400
Health and related occupations	13,890	11,880	310	270	1,360	70
Teachers, except S&E postsecondary teachers	18,500	16,130	630	450	1,240	50
Social services and related occupations	1,950	1,730	100	S	80	S
Technologists, etc.	5,460	4,340	50	60	1,000	S
Sales and marketing occupations	5,000	4,260	140	S	570	S
Other non-S&E occupations	12,360	11,160	230	180	770	S

*If the respondent was unemployed, occupation of last job was reported.

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible]
and citizenship status: [illegible]

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Field of doctorate	Total	U.S. Citizen			Non-U.S. Citizen		
		Total	Native	Naturalized	Total	Permanent resident	Temporary resident
Total	513,460	474,000	421,290	52,630	39,460	29,800	9,320
Sciences	431,890	405,100	369,510	35,510	26,790	19,880	6,670
Computer and mathematical sciences	29,720	25,720	22,460	3,240	4,000	2,990	1,000
Computer and information sciences	5,190	3,830	3,230	600	1,360	1,040	310
Mathemathical sciences	24,530	21,890	19,240	2,640	2,640	1,950	690
Life and related sciences	139,460	131,730	120,240	11,450	7,720	5,430	2,230
Agricultural and food sciences	17,450	16,170	14,530	1,640	1,280	840	410
Biological and health sciences	117,660	111,400	101,750	9,600	6,270	4,450	1,780
Environmental sciences	4,340	4,170	3,960	210	170	130	S
Physical and related sciences	112,170	103,800	91,900	11,900	8,370	5,850	2,480
Chemistry, except biochemistry	59,740	55,570	49,260	6,310	4,180	3,120	1,050
Geology and oceanography	14,320	13,550	12,500	1,050	770	510	260
Physics and astronomy	36,950	33,600	29,110	4,480	3,360	2,160	1,170
Other physical sciences (incl. earth)	1,150	1,080	1,030	60	60	60	S
Social and related sciences	150,540	143,850	134,900	8,920	6,700	5,610	960
Economics	21,850	19,550	17,660	1,880	2,300	1,770	450
Political and related sciences	16,000	15,130	13,770	1,360	860	790	70
Psychology	77,080	75,720	72,630	3,070	1,360	1,230	120
Sociology and anthropology	22,210	21,340	19,980	1,350	870	770	70
Other social sciences	13,410	12,110	10,850	1,260	1,300	1,040	250
Engineering	81,570	68,900	51,780	17,110	12,670	9,920	2,650
Aerospace/aeronautical	3,380	2,930	2,340	600	440	390	50
Chemical	12,290	10,770	8,410	2,360	1,530	1,180	340
Civil	7,270	5,940	4,000	1,940	1,330	1,050	280
Electrical/computer	21,010	17,140	12,640	4,490	3,880	3,210	630
Industrial	2,040	1,710	1,350	350	330	270	70
Mechanical	10,090	8,300	6,060	2,230	1,780	1,310	470
Other engineering	25,490	22,120	16,980	5,140	3,370	2,520	820

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table [illegible]. Doctoral scientists and engineers, by occupation and citizenship status: 1993

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Occupation*	Total	U.S. Citizen			Non-U.S. Citizen		
		Total	Native	Naturalized	Total	Permanent resident	Temporary resident
Total	513,460	474,000	421,290	52,630	39,460	29,800	9,320
Scientists	298,090	275,300	250,600	24,630	22,800	16,480	6,120
Computer and mathematical scientists	37,050	31,880	27,250	4,600	5,170	3,880	1,280
Computer and information scientists	12,690	10,990	9,240	1,740	1,700	1,260	440
Mathematical scientists	5,970	5,170	4,390	760	800	570	220
Postsecondary teachers, computer and mathematical sciences	18,390	15,720	13,620	2,100	2,670	2,050	610
Life and related scientists	92,180	85,620	78,420	7,170	6,560	4,500	2,010
Agricultural scientists	9,150	8,530	8,050	480	620	420	200
Biological scientists	49,270	44,540	39,960	4,560	4,730	3,010	1,680
Forestry and conservation scientists	1,080	1,080	1,040	S	S	S	S
Postsecondary teachers, life and related sciences	32,690	31,470	29,370	2,100	1,220	1,070	130
Physical and related scientists	72,830	66,400	59,160	7,240	6,430	4,240	2,140
Chemists, except biochemists	24,910	22,360	19,610	2,750	2,550	1,780	770
Earth scientists	8,820	8,240	7,590	650	580	290	290
Physicists and astronomers	14,240	12,530	10,940	1,590	1,720	880	820
Other physical scientists	1,660	1,420	1,150	260	250	210	S
Postsecondary teachers, physical and related sciences	23,190	21,860	19,870	1,990	1,330	1,080	220
Social and related scientists	96,030	91,390	85,770	5,600	4,640	3,860	690
Economists	6,140	5,320	4,840	480	820	520	240
Political scientists	1,280	1,250	1,130	120	S	S	S
Psychologists	39,530	38,890	37,050	1,840	630	580	60
Sociologists and anthropologists	3,350	3,220	2,950	270	130	70	60
S&T historians and other social scientists	2,030	1,960	1,850	120	70	S	S
Postsecondary teachers, social and related sciences	43,710	40,750	37,950	2,790	2,960	2,630	300
Engineers	61,570	51,150	38,930	12,220	10,430	8,080	2,260
Aerospace and related engineers	3,500	3,140	2,220	920	370	310	60
Chemical engineers	6,420	5,370	4,090	1,290	1,040	790	260
Civil and architectural engineers	2,710	2,100	1,260	840	610	460	150
Electric and related engineers	10,300	8,250	5,870	2,380	2,050	1,640	410
Industrial engineers	440	330	230	100	100	60	S
Mechanical engineers	5,590	4,410	3,010	1,390	1,180	770	400
Other engineers	15,830	13,410	10,780	2,630	2,420	1,800	590
Postsecondary teachers, engineering	16,790	14,140	11,480	2,660	2,650	2,260	340

See explanatory information and SOURCE at end of table.

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and citizenship status: [illegible]

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Occupation*	Total	U.S. Citizen			Non-U.S. Citizen		
		Total	Native	Naturalized	Total	Permanent resident	Temporary resident
Non-S&E occupations	153,800	147,560	131,760	15,790	6,240	5,240	940
Managers, administrators, etc.	96,650	93,780	84,120	9,660	2,870	2,560	270
Health and related occupations	13,890	13,300	11,530	1,760	590	480	110
Teachers, except S&E postsecondary teachers	18,500	17,290	15,480	1,820	1,200	930	260
Social services and related occupations	1,950	1,910	1,750	160	S	S	S
Technologists, etc.	5,460	4,890	4,030	860	570	420	150
Sales and marketing occupations	5,000	4,640	4,000	640	360	300	60
Other non-S&E occupations	12,360	11,750	10,860	890	610	520	80

*If the respondent was unemployed, occupation of last job was reported.

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

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Field of doctorate	Total	Under 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-75
Total	513,460	8,020	48,950	77,350	85,620	90,870	77,890	44,930	33,580	46,260
Sciences	431,890	6,150	38,360	64,970	74,100	78,440	64,510	36,360	28,630	40,380
Computer and mathematical sciences	29,720	910	3,320	4,570	4,340	5,810	5,240	2,440	1,420	1,670
Computer and information sciences	5,190	320	1,340	1,610	1,100	590	190	S	S	S
Mathemathical sciences	24,530	590	1,990	2,960	3,240	5,220	5,050	2,410	1,400	1,670
Life and related sciences	139,460	1,940	12,810	24,410	25,530	24,230	19,000	10,560	8,840	12,140
Agricultural and food sciences	17,450	130	1,430	3,250	2,680	2,390	2,490	1,460	1,490	2,130
Biological and health sciences	117,680	1,810	11,220	20,520	22,100	20,850	15,760	8,690	7,100	9,610
Environmental sciences	4,340		150	640	750	1,000	750	390	250	400
Physical and related sciences	112,170	2,240	12,160	15,760	14,720	17,450	17,690	10,800	8,920	12,430
Chemistry, except biochemistry	59,740	1,430	7,130	8,680	7,160	8,400	8,950	5,530	5,180	7,280
Geology and oceanography	14,320	80	1,270	2,090	2,430	2,630	1,920	1,550	1,090	1,270
Physics and astronomy	36,950	720	3,520	4,760	4,850	6,160	6,760	3,690	2,620	3,870
Other physical sciences(incl. earth)	1,150	S	250	220	290	280	50	S	S	S
Social and related sciences	150,540	1,060	10,060	20,230	29,500	30,950	22,590	12,550	9,450	14,150
Economics	21,850	310	1,750	2,970	3,100	4,340	3,200	1,670	1,650	2,850
Political and related sciences	16,000	S	710	1,730	2,370	3,130	3,200	1,580	1,250	1,980
Psychology	77,080	610	5,780	11,950	16,830	16,300	9,480	5,920	4,350	5,880
Sociology and anthropology	22,210	S	930	2,060	4,660	4,390	4,270	2,180	1,310	2,380
Other social sciences	13,410	60	890	1,520	2,540	2,790	2,440	1,200	890	1,080
Engineering	81,570	1,870	10,590	12,380	11,520	12,430	13,380	8,570	4,950	5,880
Aerospace/aeronautical	3,380	S	390	280	480	480	780	500	190	270
Chemical	12,290	300	1,980	1,880	1,460	1,680	1,810	1,580	700	920
Civil	7,270	120	790	1,080	950	1,140	1,560	840	520	280
Electrical/computer	21,010	630	2,880	3,270	2,680	3,510	3,440	2,080	1,070	1,440
Industrial	2,040	S	250	350	280	270	420	160	110	190
Mechanical	10,090	260	1,450	1,810	1,530	1,590	1,370	1,020	520	530
Other engineering	25,490	490	2,850	3,730	4,160	3,760	4,020	2,410	1,830	2,250

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible]

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Occupation*	Total	Under 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-75
Total	513,460	8,020	48,950	77,350	85,620	90,870	77,890	44,930	33,580	46,260
Scientists	298,090	5,810	33,690	50,850	50,520	47,840	38,940	22,980	19,160	28,290
Computer and mathematical scientists	37,050	1,170	4,380	5,730	6,130	6,570	6,100	3,030	1,770	2,160
Computer and information scientists	12,690	370	1,500	2,220	2,550	2,570	1,860	920	310	390
Mathematical scientists	5,970	260	680	690	1,170	980	890	440	290	600
Postsecondary teachers, computer and mathematical sciences	18,390	540	2,200	2,830	2,410	3,040	3,350	1,670	1,170	1,180
Life and related scientists	92,180	1,860	11,500	18,600	15,750	13,440	10,430	5,980	5,480	9,140
Agricultural scientists	9,150	130	940	1,550	1,480	1,060	1,120	670	710	1,490
Biological scientists	49,270	1,640	8,810	11,570	8,440	6,470	3,840	2,360	1,940	4,190
Forestry and conservation scientists	1,080	S	50	190	110	220	160	60	110	180
Postsecondary teachers, life and related sciences	32,690	100	1,700	5,300	5,720	5,680	5,290	2,890	2,720	3,280
Physical and related scientists	72,830	1,910	9,910	11,810	9,710	9,460	9,820	6,290	5,830	8,090
Chemists, except biochemists	24,910	1,040	4,440	4,490	3,330	2,780	2,330	1,750	1,820	2,930
Earth scientists	8,820	90	1,080	1,280	1,310	1,540	1,140	950	480	950
Physicists and astronomers	14,240	490	2,300	2,640	1,930	1,880	1,970	880	780	1,390
Other physical scientists	1,680	50	150	360	210	210	220	90	180	190
Postsecondary teachers, physical and related sciences	23,190	240	1,940	3,030	2,930	3,040	4,170	2,630	2,570	2,630
Social and related scientists	96,030	870	7,890	14,710	18,920	18,380	12,600	7,680	6,070	8,910
Economists	6,140	110	790	1,180	920	1,150	640	400	250	690
Political scientists	1,280	S	S	90	S	290	280	110	S	460
Psychologists	39,530	340	3,160	6,960	9,410	8,220	4,170	2,500	1,860	2,860
Sociologists and anthropologists	3,350	S	140	220	760	540	540	110	170	840
S&T historians and other social scientists	2,030	S	110	240	600	490	180	150	60	190
Postsecondary teachers, social and related sciences	43,710	360	3,690	5,990	7,200	7,690	6,810	4,400	3,690	3,860

See explanatory information and SOURCE at end of table.

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Occupation*	Total	Under 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-75
Engineers	61,570	1,640	8,850	10,240	8,780	8,210	8,410	5,890	4,120	5,440
Aerospace and related engineers	3,500	80	480	450	650	730	400	320	160	280
Chemical engineers	6,420	180	1,190	1,190	700	800	660	630	500	580
Civil and architectural engineers	2,710	S	290	450	420	430	480	210	170	220
Electric and related engineers	10,300	420	1,500	1,710	1,390	1,690	1,330	790	600	870
Industrial engineers	440	S	60	90	80	S	70	S	S	80
Mechanical engineers	5,590	180	840	1,140	750	610	720	820	240	280
Other engineers	15,830	460	2,400	2,600	2,470	2,030	1,960	1,370	880	1,650
Postsecondary teachers, engineering	16,790	270	2,120	2,620	2,320	1,880	2,790	1,740	1,570	1,500
Non-S&E occupations	153,800	570	6,410	16,260	26,330	34,820	30,530	16,060	10,300	12,520
Managers, administrators, etc.	96,650	170	2,580	9,270	16,220	23,140	21,380	11,250	6,330	6,310
Health and related occupations	13,890	150	1,410	2,070	2,540	2,870	1,960	970	740	1,180
Teachers, except S&E postsecondary teachers	18,500	70	800	2,180	3,410	3,900	3,150	1,620	1,310	2,050
Social services and related occupations	1,950	S	70	130	320	310	460	260	160	230
Technologists, etc.	5,460	70	520	1,030	1,140	1,050	790	200	260	390
Sales and marketing occupations	5,000	S	340	350	870	1,040	910	570	340	550
Other non-S&E occupations	12,360	80	690	1,220	1,830	2,500	1,860	1,190	1,150	1,820

*If the respondent was unemployed, occupation of last job was reported.

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

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Field of doctorate/sex	Total	Professor	Associate professor	Assistant professor	Instructor/ lecturer	Other faculty	Does not apply
Total (number)	190,640	72,020	45,160	38,380	4,590	4,740	25,750
Male (percent)	78.3	90.2	78.1	67.7	52.1	71.5	67.0
Female (percent)	21.7	9.8	21.9	32.3	47.9	28.5	33.0
Sciences (number)	169,740	62,780	40,200	34,200	4,200	4,150	24,210
Male (percent)	76.1	89.0	75.7	65.2	48.6	67.5	65.2
Female (percent)	23.8	11.0	24.3	34.8	51.4	32.5	34.8
Computer and mathematical sciences (number)	16,100	6,400	4,760	3,850	410	220	450
Male (percent)	88.2	93.8	88.7	82.3	65.9	72.7	86.7
Female (percent)	11.8	6.3	11.6	17.7	36.6	27.3	13.3
Life and related sciences (number)	62,100	19,780	13,860	13,040	1,520	1,390	12,500
Male (percent)	72.2	87.4	71.6	62.2	50.0	66.2	62.8
Female (percent)	27.8	12.6	28.4	37.8	50.7	33.8	37.2
Physical and related sciences (number)	30,030	12,690	5,690	4,670	510	790	5,680
Male (percent)	89.3	96.5	89.8	79.4	64.7	88.6	83.1
Female (percent)	10.7	3.5	10.2	20.6	35.3	11.4	16.9
Social and related sciences (number)	61,510	23,900	15,880	12,640	1,760	1,750	5,570
Male (percent)	70.5	85.1	70.5	57.8	39.2	58.3	50.8
Female (percent)	29.5	14.9	29.5	42.2	60.8	41.7	49.2
Engineering (number)	20,900	9,240	4,980	4,180	390	580	1,540
Male (percent)	95.7	98.5	96.8	88.3	89.7	100.0	95.5
Female (percent)	4.4	1.5	3.2	11.7	S	S	4.5

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

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Field of doctorate/sex	Total	Tenured	Not tenured		Not applicable
			In tenure track	Not in track	
Total (number)	190,640	105,750	34,470	17,210	33,210
Male (percent)	78.3	86.3	70.3	66.8	66.9
Female (percent)	21.7	13.7	29.7	33.2	33.1
Sciences (number)	169,740	93,000	30,110	15,690	30,930
Male (percent)	76.1	84.8	67.5	64.1	64.8
Female (percent)	23.8	15.2	32.5	35.9	35.2
Computer and mathematical sciences	16,100	10,520	3,510	990	1,080
Male (percent)	88.2	91.4	83.2	78.8	81.5
Female (percent)	11.8	8.6	16.8	21.2	18.5
Life and related sciences (number)	62,100	29,320	11,000	7,230	14,540
Male (percent)	72.2	82.3	64.5	59.8	64.0
Female (percent)	27.8	17.7	35.5	40.2	36.0
Physical and related sciences (number)	30,030	16,810	4,270	2,740	6,210
Male (percent)	89.3	94.6	82.2	79.9	83.9
Female (percent)	10.7	5.4	17.8	20.1	16.1
Social and related sciences (number)	61,510	36,350	11,330	4,730	9,100
Male (percent)	70.5	80.2	60.0	58.6	51.2
Female (percent)	29.5	19.8	40.0	41.4	48.8
Engineering (number)	20,900	12,750	4,350	1,520	2,280
Male (percent)	95.7	97.9	89.7	95.4	95.2
Female (percent)	4.4	2.1	10.3	5.3	4.8

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible] broad field of doctorate [illegible]

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Field of doctorate/ Primary Work Activity	Total	R&D	Teaching	Management, sales, and administration	Computer applications	Other	No secondary activity
Total:							
Total (number)	190,640	81,890	42,210	31,910	9,670	10,100	14,870
(percent)	100.0	43.0	22.1	16.7	5.1	5.3	7.8
R&D	70,050	18,030	31,670	9,120	4,580	2,410	4,240
	100.0	25.7	45.2	13.0	6.5	3.4	6.1
Teaching	88,400	55,010	D	13,890	4,500	6,250	8,750
	100.0	62.2		15.7	5.1	7.1	9.9
Management, sales, and administration	19,780	4,760	6,800	6,170	370	1,160	520
	100.0	24.1	34.4	31.2	1.9	5.9	2.6
Computer applications	1,860	940	250	470	D	60	150
	100.0	50.5	13.4	25.3		3.2	8.1
Other activities	10,550	3,150	3,500	2,260	220	220	1,210
	100.0	29.9	33.2	21.4	2.1	2.1	11.5
Sciences:							
Total (number)	169,740	71,160	37,560	29,190	8,190	9,640	13,990
(percent)	100.0	41.9	22.1	17.2	4.8	5.7	8.2
R&D	63,220	16,290	27,980	8,370	4,110	2,390	4,090
	100.0	25.8	44.3	13.2	6.5	3.8	6.5
Teaching	77,490	47,130	D	12,780	3,600	5,870	8,100
	100.0	60.8		16.5	4.6	7.6	10.5
Management, sales, and administration	17,220	3,990	5,920	5,460	260	1,130	470
	100.0	23.2	34.4	31.7	1.5	6.6	2.7
Computer applications	1,530	720	200	420	D	40	150
	100.0	47.1	13.1	27.5		2.6	9.8
Other activities	10,280	3,030	3,460	2,160	220	220	1,180
	100.0	29.5	33.7	21.0	2.1	2.1	11.5
Computer and mathematical sciences:							
Total (number)	16,100	7,100	3,260	2,180	1,390	730	1,440
(percent)	100.0	44.1	20.2	13.5	8.6	4.5	8.9
R&D	3,840	580	2,560	270	170	50	210
	100.0	15.1	66.7	7.0	4.4	1.3	5.5
Teaching	10,560	6,120	D	1,430	1,170	650	1,200
	100.0	58.0		13.5	11.1	6.2	11.4

See explanatory information and SOURCE at end of table.

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Field of doctorate/ Primary Work Activity	Total	R&D	Teaching	Management, sales, and administration	Computer applications	Other	No secondary activity
Computer and mathematical sciences (continued):							
Management, sales, and administration (number)	1,290	250	580	390	S	S	S
(percent)	100.0	19.4	45.0	30.2			
Computer applications	190	50	50	70	D	S	S
	100.0	26.3	26.3	36.8			
Other activities	220	100	70	S	S	S	S
	100.0	45.5	31.8				
Life and related sciences:							
Total (number)	62,100	23,870	15,530	11,140	2,280	3,670	5,600
(percent)	100.0	38.4	25.0	17.9	3.7	5.9	9.0
R&D	32,190	9,340	11,910	5,050	1,600	1,530	2,750
	100.0	29.0	37.0	15.7	5.0	4.8	8.5
Teaching	18,460	11,090	D	3,070	510	1,650	2,130
	100.0	60.1		16.6	2.8	8.9	11.5
Management, sales, and administration	6,150	1,590	1,870	2,060	80	390	160
	100.0	25.9	30.4	33.5	1.3	6.3	2.6
Computer applications	420	240	S	100	D	S	S
	100.0	57.1		23.8			
Other activities	4,880	1,610	1,720	860	90	70	530
	100.0	33.0	35.2	17.6	1.8	1.4	10.9
Physical and related sciences:							
Total (number)	30,030	13,500	5,880	4,670	2,680	800	2,510
(percent)	100.0	45.0	19.6	15.6	8.9	2.7	8.4
R&D	12,140	3,730	4,720	1,250	1,480	230	740
	100.0	30.7	38.9	10.3	12.2	1.9	6.1
Teaching	13,790	8,240	D	2,540	1,040	450	1,520
	100.0	59.8		18.4	7.5	3.3	11.0
Management, sales, and administration	2,780	990	840	680	100	120	50
	100.0	35.6	30.2	24.5	3.6	4.3	1.8
Computer applications	580	330	60	120	D	S	70
	100.0	56.9	10.3	20.7			12.1
Other activities	750	210	260	70	70	S	130
	100.0	28.0	34.7	9.3	9.3		17.3

See explanatory information and SOURCE at end of table.

[illegible]

Field of doctorate/ Primary Work Activity	Total	R&D	Teaching	Management, sales, and administration	Computer applications	Other	No secondary activity
Social and related sciences:							
Total (number)	61,510	26,700	12,890	11,210	1,830	4,440	4,440
(percent)	100.0	43.4	21.0	18.2	3.0	7.2	7.2
R&D	15,060	2,640	8,790	1,800	860	580	390
	100.0	17.5	58.4	12.0	5.7	3.9	2.6
Teaching	34,680	21,690	D	5,740	880	3,120	3,250
	100.0	62.5		16.6	2.5	9.0	9.4
Management, sales, and administration	7,000	1,150	2,630	2,330	S	600	250
	100.0	16.4	37.6	33.3		8.6	3.6
Computer applications	340	100	60	130	D	S	50
	100.0	29.4	17.6	38.2			14.7
Other activities	4,430	1,120	1,410	1,210	50	150	500
	100.0	25.3	31.8	27.3	1.1	3.4	11.3
Engineering:							
Total (number)	20,900	10,720	4,650	2,720	1,480	450	870
(percent)	100.0	51.3	22.2	13.0	7.1	2.2	4.2
R&D	6,830	1,740	3,690	750	480	S	150
	100.0	25.5	54.0	11.0	7.0		2.2
Teaching	10,910	7,880	D	1,110	900	380	640
	100.0	72.2		10.2	8.2	3.5	5.9
Management, sales, and administration	2,560	780	880	710	100	S	60
	100.0	30.5	34.4	27.7	3.9		2.3
Computer applications	340	220	S	50	D	S	S
	100.0	64.7		14.7			
Other activities	270	110	S	100	S	S	S
	100.0	40.7		37.0			

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)
D = The same work activity cannot be reported for both primary and secondary.

NOTE: Total numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible] by field of doctorate and sector of employment: [illegible]

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Field of doctorate	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Self-employed	Private not-for-profit	Federal government	State and local government	Other sector
Total	462,870	210,070	11,720	141,190	28,270	23,610	33,800	12,810	1,390
Sciences	387,740	185,350	11,330	101,380	25,770	21,340	29,060	12,150	1,370
Computer and mathematical sciences	27,940	17,320	640	7,370	610	750	1,120	90	S
Computer and information sciences	5,140	2,440	70	2,360	50	100	100	S	S
Mathemathical sciences	22,800	14,880	580	5,010	560	650	1,020	80	S
Life and related sciences	124,580	66,910	2,780	29,550	3,880	6,390	11,700	3,240	140
Agricultural and food sciences	15,100	7,110	320	4,660	620	440	1,670	240	S
Biological and health sciences	105,630	58,360	2,400	24,040	3,180	5,910	9,040	2,620	80
Environmental sciences	3,850	1,430	60	850	80	S	990	380	S
Physical and related sciences	98,530	36,410	2,190	43,670	2,660	4,060	8,190	1,290	50
Chemistry, except biochemistry	51,760	15,490	1,310	29,200	1,340	1,420	2,470	520	S
Geology and oceanography	12,500	5,570	230	3,140	410	560	2,150	430	S
Physics and astronomy	33,150	14,890	640	11,120	870	2,030	3,350	230	S
Other physical sciences(incl. earth)	1,120	460	S	210	S	60	220	110	S
Social and related sciences	136,680	64,710	5,710	20,790	18,620	10,140	8,050	7,530	1,150
Economics	19,410	11,790	260	2,430	910	720	2,020	410	880
Political and related sciences	14,290	9,310	450	1,260	720	810	960	640	140
Psychology	71,020	23,350	3,870	13,390	15,660	6,570	3,270	4,910	S
Sociology and anthropology	19,790	12,960	740	1,700	850	1,410	1,130	930	90
Other social sciences	12,170	7,290	390	2,010	480	630	670	640	S
Engineering	75,120	24,720	390	39,810	2,510	2,270	4,740	650	S
Aerospace/aeronautical	3,050	1,130	S	1,260	230	70	360	S	S
Chemical	11,140	2,280	70	7,590	400	340	450	S	S
Civil	7,060	2,930	S	2,740	310	170	580	310	S
Electrical/computer	19,410	6,150	80	11,060	540	530	960	80	S
Industrial	1,900	1,120	S	580	S	S	110	S	S
Mechanical	9,470	3,200	70	4,950	240	370	580	50	S
Other engineering	23,100	7,910	130	11,630	770	740	1,700	200	S

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible]

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Occupation	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Self-employed	Private not-for-profit	Federal government	State and local government	Other sector
Total	462,870	210,070	11,720	141,190	28,270	23,610	33,800	12,810	1,390
Scientists	267,070	146,060	7,390	58,350	17,260	11,810	19,260	6,030	920
Computer and mathematical scientists	34,440	19,080	620	10,790	760	1,220	1,600	360	S
Computer and information scientists	11,810	1,050	S	8,720	600	700	520	200	S
Mathematical scientists	5,140	1,160	S	2,070	160	510	1,070	160	S
Postsecondary teachers, computer and mathematical sciences	17,490	16,860	610	S	S	S	S	S	S
Life and related scientists	80,960	52,240	1,430	14,300	730	3,350	7,560	1,290	70
Agricultural scientists	7,500	3,230	S	2,460	70	90	1,420	150	S
Biological scientists	43,430	21,020	S	11,720	630	3,230	5,760	1,040	S
Forestry and conservation scientists	820	210	S	110	S	S	330	100	S
Postsecondary teachers, life and related sciences	29,220	27,780	1,380	S	S	S	S	S	S
Physical and related scientists	63,660	29,550	1,680	22,730	890	2,260	5,940	610	S
Chemists, except biochemists	21,210	2,830	50	15,510	450	650	1,460	270	S
Earth scientists	7,610	2,300	S	2,230	180	360	2,270	260	S
Physicists and astronomers	12,610	4,960	S	4,190	250	1,160	2,000	S	S
Other physical scientists	1,470	340	S	790	S	90	210	S	S
Postsecondary teachers, physical and related sciences	20,760	19,120	1,630	S	S	S	S	S	S
Social and related scientists	88,000	45,190	3,660	10,530	14,880	4,990	4,170	3,770	810
Economists	5,380	840	S	1,440	440	280	1,340	240	750
Political scientists	820	290	S	110	80	90	170	70	S
Psychologists	37,370	3,940	1,980	8,300	14,090	3,920	2,090	3,060	S
Sociologists and anthropologists	2,470	1,150	S	300	130	370	290	130	60
S&T historians and other social scientists	1,720	380	50	380	100	310	260	280	S
Postsecondary teachers, social and related sciences	40,260	38,600	1,570	S	S	S	S	S	S

See explanatory information and SOURCE at end of table.

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Occupation	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Self-employed	Private not-for-profit	Federal government	State and local government	Other sector
Engineers	55,550	20,240	110	28,310	1,930	1,650	2,900	410	S
Aerospace and related engineers	3,150	350	S	2,050	140	150	460	S	S
Chemical engineers	5,610	430	S	4,620	250	170	150	S	S
Civil and architectural engineers	2,460	230	S	1,490	230	70	230	200	S
Electric and related engineers	9,270	950	S	6,830	380	420	670	S	S
Industrial engineers	350	S	S	280	S	S	S	S	S
Mechanical engineers	5,090	710	S	3,560	230	240	340	S	S
Other engineers	13,960	2,020	S	9,470	700	560	1,030	180	S
Postsecondary teachers, engineering	15,660	15,540	110	S	S	S	S	S	S
Non-S&E occupations	140,240	43,770	4,230	54,540	9,090	10,150	11,640	6,360	460
Managers, administrators, etc.	90,400	24,340	1,750	40,220	2,400	7,110	9,530	4,660	380
Health and related occupations	12,570	3,970	90	3,690	1,930	1,170	1,070	610	S
Teachers, except S&E postsecondary teachers	16,150	13,880	2,100	S	S	50	S	50	S
Social services and related occupations	1,660	180	230	150	90	750	S	260	S
Technologists, etc.	4,820	640	S	3,330	420	80	260	110	S
Sales and marketing occupations	4,490	S	S	3,370	1,030	80	S	S	S
Other non-S&E occupations	10,140	750	60	3,750	3,210	920	750	670	S

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

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Field of doctorate	Total	Research & development					Teaching	Management, sales, and administration	Computer applications	Prof. services/ other
		Total	Applied research	Basic research	Development	Design				
Total	462,870	191,120	92,980	64,460	23,270	10,440	101,220	81,590	18,680	70,250
Sciences	387,740	154,040	73,870	60,750	14,530	4,890	89,070	65,950	12,580	66,100
Computer and mathematical sciences	27,940	8,320	3,690	3,460	520	650	11,590	3,460	3,480	1,100
Computer and information sciences	5,140	1,920	1,000	670	140	110	1,360	600	1,160	100
Mathemathical sciences	22,800	6,400	2,690	2,790	380	540	10,230	2,850	2,320	1,000
Life and related sciences	124,580	63,930	27,460	31,620	3,950	900	21,830	21,120	1,900	15,800
Agricultural and food sciences	15,100	8,000	5,340	1,490	1,030	150	2,030	3,350	340	1,370
Biological and health sciences	105,630	54,410	21,000	29,920	2,790	700	19,110	16,580	1,490	14,070
Environmental sciences	3,850	1,510	1,120	210	130	50	700	1,210	70	380
Physical and related sciences	98,530	52,130	25,740	15,790	8,120	2,490	16,580	18,430	4,890	6,500
Chemistry, except biochemistry	51,780	28,120	15,290	6,680	5,410	750	7,890	10,630	1,390	3,720
Geology and oceanography	12,500	6,380	3,138	2,720	380	150	2,710	2,070	580	810
Physics and astronomy	33,150	17,120	7,040	6,210	2,310	1,580	5,770	5,520	2,900	1,850
Other physical sciences (incl. earth)	1,120	530	270	180	50	N	210	210	N	120
Social and related sciences	136,680	29,660	16,980	9,880	1,950	850	39,070	22,940	2,320	42,700
Economics	19,410	6,510	4,390	1,690	280	140	7,140	3,730	200	1,830
Political and related sciences	14,290	2,850	1,480	1,050	220	100	6,530	3,040	160	1,710
Psychology	71,020	11,910	6,700	3,810	950	460	11,830	9,900	1,170	38,220
Sociology and anthropology	19,790	5,430	2,880	2,210	240	90	8,490	3,910	380	1,610
Other social sciences	12,170	2,980	1,520	1,130	280	60	5,070	2,380	430	1,340
Engineering	75,120	37,080	19,090	3,700	8,740	5,550	12,150	15,630	6,100	4,160
Aerospace/aeronautical	3,050	1,290	840	90	270	90	600	650	340	170
Chemical	11,140	6,350	3,110	460	1,830	950	930	2,680	680	510
Civil	7,080	3,080	1,680	210	300	910	1,590	1,330	470	590
Electrical/computer	19,410	9,070	4,150	900	2,510	1,500	3,190	4,110	2,280	780
Industrial	1,900	440	300	N	N	60	770	350	230	110
Mechanical	9,470	4,520	2,070	580	1,290	580	1,720	2,100	720	400
Other engineering	23,100	12,330	6,980	1,430	2,500	1,440	3,340	4,420	1,410	1,600

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible]

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Occupation	Total	R&D	Teaching	Management, sales, and administration	Computer applications	Prof. services/ other
Total	462,870	191,120	101,220	81,590	18,680	70,250
Scientists	267,070	129,130	74,600	11,430	10,030	41,870
Computer and mathematical scientists	34,440	11,540	13,170	1,410	7,320	1,000
Computer and information scientists	11,810	4,020	S	810	6,560	400
Mathematical scientists	5,140	3,700	80	230	670	460
Postsecondary teachers, computer and mathematical sciences	17,490	3,820	13,060	370	100	140
Life and related scientists	80,960	56,890	16,080	3,330	650	4,020
Agricultural scientists	7,500	6,070	70	510	130	720
Biological scientists	43,430	38,460	460	1,930	440	2,140
Forestry and conservation scientists	820	500	S	140	S	150
Postsecondary teachers, life and related sciences	29,220	11,860	15,530	750	60	1,020
Physical and related scientists	63,660	41,090	15,310	3,230	1,610	2,420
Chemists, except biochemists	21,210	18,330	130	1,530	260	960
Earth scientists	7,610	6,280	50	460	440	360
Physicists and astronomers	12,610	10,260	160	680	780	730
Other physical scientists	1,470	1,070	S	90	50	240
Postsecondary teachers, physical and related sciences	20,760	5,140	14,950	470	70	130
Social and related scientists	88,000	19,610	30,040	3,470	460	34,430
Economists	5,360	3,600	S	550	110	1,080
Political scientists	820	540	50	S	S	220
Psychologists	37,370	3,640	260	1,550	130	31,760
Sociologists and anthropologists	2,470	1,870	180	130	70	220
S&T historians and other social scientists	1,720	1,110	S	280	60	260
Postsecondary teachers, social and related sciences	40,260	8,840	29,510	940	90	880
Engineers	55,550	34,710	10,930	3,020	3,750	3,150
Aerospace and related engineers	3,150	2,430	S	150	470	80
Chemical engineers	5,610	4,840	90	340	280	70
Civil and architectural engineers	2,460	1,540	S	220	320	350
Electric and related engineers	9,270	7,210	50	570	1,080	390
Industrial engineers	350	190	S	80	S	50
Mechanical engineers	5,090	3,940	50	160	640	290
Other engineers	13,960	10,160	50	1,070	830	1,840
Postsecondary teachers, engineering	15,660	4,400	10,630	430	120	70
Non-S&E occupations	140,240	27,280	15,690	67,130	4,910	25,230
Managers, administrators,etc.	90,400	17,730	2,920	60,800	1,780	7,170
Health and related occupations	12,570	2,190	300	810	140	9,130
Teachers, except S&E postsecondary teachers	16,150	3,320	11,630	530	S	640
Social services and related occupations	1,660	150	250	230	S	1,040
Technologists, etc.	4,820	1,870	S	270	2,440	230
Sales and marketing occupations	4,490	640	S	3,100	170	560
Other non-S&E occupations	10,140	1,400	550	1,400	340	6,460

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

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Geographic location	Total	Sciences	Computer and mathematical sciences	Life and related sciences	Physical and related sciences	Social and related sciences	Engineering
Total	462,870	387,440	27,940	124,580	98,530	136,680	75,120
	[Percentage distribution]						
New England	7.8	8.0	8.2	7.3	8.4	8.4	6.9
Connecticut	1.6	1.7	1.5	1.7	1.7	1.6	1.4
Maine	0.4	0.4	0.3	0.4	0.3	0.6	0.3
Massachusetts	4.6	4.7	5.2	4.2	5.3	4.6	4.1
New Hampshire	0.4	0.4	0.6	0.2	0.5	0.5	0.5
Rhode Island	0.4	0.5	0.5	0.4	0.4	0.6	0.4
Vermont	0.3	0.3	S	0.4	0.1	0.5	0.3
Middle Atlantic	17.4	17.5	18.6	15.5	17.8	18.8	16.8
New Jersey	4.2	4.0	4.8	3.3	5.9	3.0	5.2
New York	8.4	8.8	9.5	7.7	6.9	11.0	6.6
Pennsylvania	4.8	4.7	4.4	4.5	5.0	4.7	5.0
East North Central	13.8	13.7	13.2	13.8	13.8	13.6	14.4
Illinois	4.1	4.2	4.2	4.1	4.2	4.3	3.8
Indiana	1.6	1.7	1.4	1.7	1.5	1.8	1.5
Michigan	2.8	2.7	2.8	2.9	2.7	2.6	3.3
Ohio	3.6	3.4	3.4	3.1	4.1	3.2	4.7
Wisconsin	1.6	1.7	1.5	1.9	1.3	1.7	1.2
West North Central	6.0	6.2	5.9	7.6	4.6	6.2	4.6
Iowa	0.8	0.9	1.1	1.1	0.5	0.9	0.5
Kansas	0.7	0.7	0.8	0.9	0.3	0.9	0.7
Minnesota	1.7	1.8	1.4	1.9	1.7	1.9	1.4
Missouri	1.7	1.8	1.9	2.3	1.5	1.6	1.3
North Dakota	0.3	0.3	0.3	0.4	0.1	0.2	0.2
Nebraska	0.5	0.5	0.3	0.9	0.3	0.5	0.3
South Dakota	0.2	0.2	S	0.3	0.1	0.3	0.1
South Atlantic	18.9	19.4	19.6	20.3	17.6	19.8	16.1
Delaware	0.8	0.8	0.3	0.7	1.5	0.3	0.8
Dist of Columbia	2.9	3.2	2.8	2.0	2.5	4.9	1.4
Florida	2.5	2.5	1.6	2.4	1.8	3.3	2.8
Georgia	1.8	1.9	1.9	2.4	1.3	1.9	1.2
Maryland	4.0	4.1	4.4	5.5	3.8	2.9	3.5
North Carolina	2.6	2.8	2.9	3.7	2.3	2.3	1.8
South Carolina	0.9	0.9	1.0	1.1	0.9	0.8	1.0
Virginia	3.0	2.9	4.6	2.0	3.1	3.3	3.2
West Virginia	0.4	0.4	0.2	0.5	0.5	0.2	0.5
East South Central	4.1	4.1	5.1	4.4	3.6	3.9	4.2
Alabama	1.1	1.0	2.0	1.2	0.9	0.7	1.5
Kentucky	0.8	0.8	1.4	0.8	0.7	0.9	0.4
Mississippi	0.6	0.6	0.3	0.9	0.3	0.6	0.7
Tennessee	1.7	1.7	1.4	1.6	1.7	1.8	1.6

See explanatory information and SOURCE at end of table.

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Geographic location	Total	Sciences	Computer and mathematical sciences	Life and related sciences	Physical and related sciences	Social and related sciences	Engineering
	[Percentage distribution]						
West South Central	8.1	7.8	7.0	8.3	8.7	6.7	9.5
Arkansas	0.4	0.4	S	0.4	0.3	0.5	0.2
Louisiana	1.1	1.1	0.8	1.4	1.2	0.9	1.0
Oklahoma	1.0	0.9	0.4	1.0	0.9	0.9	1.2
Texas	5.6	5.3	5.7	5.5	6.3	4.4	7.1
Mountain	6.3	6.1	6.1	5.6	7.8	5.5	7.4
Arizona	1.1	1.0	0.7	0.9	0.9	1.2	1.5
Colorado	1.9	1.9	1.8	1.8	2.5	1.6	1.9
Idaho	0.4	0.4	0.3	0.6	0.2	0.4	0.5
Montana	0.3	0.4	0.4	0.5	0.2	0.4	S
New Mexico	1.4	1.2	1.7	0.6	2.5	0.7	2.2
Nevada	0.3	0.3	0.3	0.2	0.4	0.3	0.3
Utah	0.8	0.8	0.8	0.8	0.7	0.8	1.0
Wyoming	0.2	0.2	S	0.2	0.2	0.1	0.1
Pacific	17.5	17.1	16.1	17.0	17.5	17.0	19.9
Alaska	0.2	0.2	0.2	0.2	0.3	0.3	0.1
California	13.1	12.5	12.5	11.4	13.8	12.5	16.2
Hawaii	0.5	0.6	0.3	0.7	0.4	0.6	0.3
Oregon	1.2	1.3	1.5	1.7	0.7	1.3	0.9
Washington	2.3	2.3	1.5	2.8	2.2	2.1	2.3
U.S. possessions	0.2	0.2	0.3	0.3	0.2	0.2	0.2

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

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Geographic location	Total	Scientists	Computer and mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Engineers	Non-S&E occupations
Total	462,870	267,[illegible]70	34,440	80,980	63,660	88,000	55,550	140,240
	[Percentage distribution]							
New England	7.8	8.4	8.2	8.2	7.9	8.9	6.8	7.2
Connecticut	1.6	1.7	1.7	1.9	1.6	1.7	1.3	1.6
Maine	0.4	0.4	0.2	0.4	0.4	0.6	0.1	0.5
Massachusetts	4.6	5.0	5.0	4.8	4.9	5.1	4.2	4.1
New Hampshire	0.4	0.4	0.8	0.3	0.3	0.4	0.5	0.4
Rhode Island	0.4	0.5	0.5	0.4	0.5	0.6	0.3	0.4
Vermont	0.3	0.3	S	0.4	0.2	0.5	0.3	0.3
Middle Atlantic	17.4	17.7	19.2	15.5	17.5	19.3	16.8	17.0
New Jersey	4.2	3.9	5.2	3.3	5.3	2.9	5.1	4.3
New York	8.4	8.9	9.2	7.6	7.1	11.5	6.5	8.3
Pennsylvania	4.8	4.8	4.8	4.6	5.1	4.9	5.2	4.4
East North Central	13.8	13.7	12.9	14.1	14.0	13.4	15.4	13.4
Illinois	4.1	4.0	4.3	4.0	4.1	3.7	4.2	4.4
Indiana	1.6	1.7	1.3	1.7	1.6	2.0	1.6	1.5
Michigan	2.8	2.9	3.1	3.2	2.7	2.6	3.7	2.4
Ohio	3.6	3.5	2.9	3.3	4.1	3.4	4.6	3.5
Wisconsin	1.6	1.7	1.2	2.0	1.5	1.6	1.3	1.6
West North Central	6.0	6.6	5.4	7.9	5.4	6.6	4.8	5.3
Iowa	0.8	1.0	1.0	1.2	0.6	1.0	0.5	0.7
Kansas	0.7	0.8	0.6	0.9	0.5	1.0	0.6	0.6
Minnesota	1.7	1.9	1.8	1.6	1.9	2.1	1.6	1.5
Missouri	1.7	1.8	1.4	2.5	1.6	1.5	1.4	1.7
North Dakota	0.3	0.3	0.3	0.5	0.2	0.3	0.2	0.2
Nebraska	0.5	0.6	0.2	0.9	0.6	0.4	0.3	0.5
South Dakota	0.2	0.2	0.1	0.3	0.1	0.3	S	0.2
South Atlantic	18.9	18.7	19.3	19.5	17.5	18.7	15.3	20.6
Delaware	0.8	0.8	0.3	0.9	1.4	0.4	0.9	0.7
Dist of Columbia	2.9	2.6	2.5	1.6	2.1	4.1	0.8	4.3
Florida	2.5	2.4	1.4	2.3	1.9	3.2	3.1	2.6
Georgia	1.8	1.8	1.9	2.2	1.4	1.8	1.2	1.8
Maryland	4.0	4.2	4.4	5.4	4.3	2.9	2.9	3.9
North Carolina	2.6	2.9	2.7	3.9	2.6	2.4	1.8	2.5
South Carolina	0.9	0.9	0.8	1.0	1.0	0.8	1.0	0.9
Virginia	3.0	2.7	5.1	1.8	2.3	2.9	2.9	3.5
West Virginia	0.4	0.4	0.3	0.4	0.6	0.2	0.6	0.3
East South Central	4.1	4.1	4.3	4.5	3.6	4.0	4.5	4.0
Alabama	1.1	0.9	1.5	1.2	0.7	0.6	1.7	1.1
Kentucky	0.8	0.8	1.2	0.8	0.6	0.9	0.4	0.8
Mississippi	0.6	0.5	0.2	0.8	0.4	0.5	0.7	0.7
Tennessee	1.7	1.8	1.5	1.7	1.9	2.0	1.8	1.3

See explanatory information and SOURCE at end of table.

[illegible] occupation: 1993

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Geographic location	Total	Scientists	Computer and mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Engineers	Non-S&E occupations
	[Percentage distribution]							
West South Central	8.1	7.8	8.0	8.1	8.6	6.9	9.3	8.1
Arkansas	0.4	0.4	S	0.5	0.3	0.5	0.2	0.4
Louisiana	1.1	1.1	0.8	1.5	1.1	0.9	1.2	1.1
Oklahoma	1.0	0.9	0.6	1.0	1.0	1.1	0.9	1.0
Texas	5.6	5.3	6.5	5.2	6.2	4.4	7.0	5.5
Mountain	6.3	6.3	5.7	5.5	8.9	5.5	7.2	6.1
Arizona	1.1	1.0	0.7	0.9	1.2	1.1	1.3	1.2
Colorado	1.9	2.0	1.7	1.7	2.5	1.9	1.7	1.9
Idaho	0.4	0.4	0.3	0.5	0.3	0.3	0.5	0.4
Montana	0.3	0.4	0.4	0.5	0.3	0.4	S	0.3
New Mexico	1.4	1.3	1.2	0.5	3.0	0.7	2.1	1.3
Nevada	0.3	0.4	0.4	0.2	0.5	0.4	0.3	0.2
Utah	0.8	0.8	1.0	1.0	0.7	0.5	1.0	0.8
Wyoming	0.2	0.2	S	0.2	0.3	0.1	0.1	0.1
Pacific	17.5	16.6	16.7	16.7	16.6	16.6	20.0	18.3
Alaska	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2
California	13.1	12.1	12.5	11.1	12.6	12.5	16.2	13.7
Hawaii	0.5	0.6	0.2	0.7	0.5	0.6	0.3	0.5
Oregon	1.2	1.3	1.5	1.8	0.7	1.2	0.8	1.3
Washington	2.3	2.2	2.1	2.6	2.2	1.9	2.4	2.3
U.S. possessions	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.3

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 2c. Employed doctoral scientists and engineers, by field of doctorate, race/ethnicity, and sex: 1993

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Field of doctorate	Total	Total		White			Black		
		Male	Female	Total	Male	Female	Total	Male	Female
Total	462,870	369,260	93,610	390,430	310,650	79,770	9,620	6,520	3,100
Sciences	387,740	297,330	90,410	337,080	259,480	77,590	8,640	5,590	3,050
Computer and mathematical sciences	27,940	24,560	3,390	22,490	19,870	2,620	400	340	60
Computer and information sciences	5,140	4,350	790	3,550	2,950	600	70	50	S
Mathemathical sciences	22,800	20,200	2,600	18,940	16,930	2,020	330	290	S
Life and related sciences	124,580	92,600	31,990	108,790	81,590	27,200	2,380	1,460	920
Agricultural and food sciences	15,100	13,160	1,930	12,970	11,410	1,560	240	210	S
Biological and health sciences	105,630	75,850	29,780	92,220	66,820	25,400	2,110	1,220	890
Environmental sciences	3,850	3,580	270	3,600	3,360	240	S	S	S
Physical and related sciences	98,530	88,700	9,840	83,180	75,730	7,450	1,040	940	100
Chemistry, except biochemistry	51,760	45,130	6,620	42,840	37,870	4,970	760	670	90
Geology and oceanography	12,500	11,200	1,300	11,480	10,310	1,170	S	S	S
Physics and astronomy	33,150	31,450	1,700	27,860	26,740	1,120	240	230	S
Other physical sciences(incl. earth)	1,120	910	210	1,010	810	200	S	S	S
Social and related sciences	136,680	91,480	45,200	122,610	82,290	40,320	4,810	2,840	1,970
Economics	19,410	16,890	2,520	16,620	14,510	2,110	580	510	60
Political and related sciences	14,290	11,680	2,610	12,530	10,190	2,340	730	580	150
Psychology	71,020	42,130	28,890	65,620	39,510	26,110	2,240	980	1,260
Sociology and anthropology	19,790	12,470	7,320	17,730	11,230	6,500	790	490	300
Other social sciences	12,170	8,300	3,860	10,110	6,850	3,250	470	280	190
Engineering	75,120	71,930	3,200	53,350	51,170	2,180	980	930	50
Aerospace/aeronautical	3,050	3,020	S	2,430	2,410	S	60	60	S
Chemical	11,140	10,650	490	8,030	7,680	350	90	60	S
Civil	7,060	6,830	230	4,860	4,710	150	140	130	S
Electrical/computer	19,410	18,740	670	13,490	13,090	400	250	240	S
Industrial	1,900	1,620	270	1,410	1,180	230	S	S	S
Mechanical	9,470	9,210	260	6,380	6,240	140	150	150	S
Other engineering	23,100	21,860	1,240	16,750	15,860	890	290	280	S

See explanatory information and SOURCE at end of table.

[illegible] Employed doctoral scientists and engineers, by field of doctorate, race/ethnicity, and sex: 1993

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Field of doctorate	Hispanic			Asian			Native American		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	9,420	7,130	2,290	51,670	43,620	8,050	1,730	1,340	390
Sciences	8,050	5,880	2,170	32,420	25,200	7,210	1,560	1,180	380
Computer and mathematical sciences	740	670	70	4,230	3,610	620	70	60	S
Computer and information sciences	160	140	S	1,360	1,220	140	S	S	S
Mathemathical sciences	590	530	60	2,880	2,400	480	60	60	S
Life and related sciences	2,160	1,560	600	10,840	7,710	3,140	400	280	130
Agricultural and food sciences	310	270	S	1,550	1,250	300	S	S	S
Biological and health sciences	1,810	1,260	550	9,160	6,340	2,820	330	210	120
Environmental sciences	S	S	S	140	120	S	50	S	S
Physical and related sciences	1,860	1,550	310	12,160	10,200	1,960	280	280	S
Chemistry, except biochemistry	1,120	900	220	6,850	5,510	1,340	190	180	S
Geology and oceanography	200	170	S	760	660	100	S	S	S
Physics and astronomy	550	480	60	4,440	3,930	510	70	70	S
Other physical sciences(incl. earth)	S	S	S	100	100	S	S	S	S
Social and related sciences	3,290	2,100	1,190	5,180	3,680	1,490	800	560	230
Economics	430	390	S	1,720	1,410	310	60	60	S
Political and related sciences	260	210	50	720	660	70	50	50	S
Psychology	1,640	920	720	1,110	500	610	410	220	190
Sociology and anthropology	540	300	240	570	330	240	160	130	S
Other social sciences	410	280	140	1,060	790	270	120	110	S
Engineering	1,370	1,250	120	19,250	18,410	830	170	160	S
Aerospace/aeronautical	60	60	S	510	500	S	S	S	S
Chemical	230	190	S	2,790	2,710	80	S	S	S
Civil	120	120	S	1,940	1,870	70	S	S	S
Electrical/computer	410	400	S	5,200	4,940	250	70	70	S
Industrial	S	S	S	430	400	S	S	S	S
Mechanical	130	120	S	2,790	2,690	90	S	S	S
Other engineering	390	360	S	5,600	5,300	300	60	60	S

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible]

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Occupation	Total	Total			White			Black	
		Male	Female	Total	Male	Female	Total	Male	Female
Total	462,870	369,260	93,610	390,430	310,650	79,770	9,620	6,520	3,100
Scientists	267,070	205,800	61,270	229,510	177,200	52,310	5,340	3,570	1,770
Computer and information scientists	11,810	10,510	1,310	9,100	8,090	1,010	110	90	S
Mathematical scientists	5,140	4,400	740	4,120	3,600	520	70	50	S
Postsecondary teachers, computer and mathematical sciences	17,480	15,300	2,130	14,060	12,440	1,620	320	280	50
Life and related scientists	80,980	61,500	19,480	69,720	53,500	16,220	1,170	760	410
Agricultural scientists	7,500	6,490	1,010	6,600	5,710	890	60	S	S
Biological scientists	43,430	31,080	12,350	35,940	26,040	9,900	570	340	220
Forestry and conservation scientists	820	710	110	780	680	100	S	S	S
Postsecondary teachers, life and related sciences	29,220	23,230	5,980	26,400	21,070	5,330	540	380	160
Physical and related scientists	63,660	57,010	6,650	53,300	48,220	5,080	820	750	80
Chemists, except biochemists	21,210	18,480	2,760	16,870	14,890	1,980	310	290	S
Earth scientists	7,610	6,860	750	6,870	6,190	680	S	S	S
Physicists and astronomers	12,610	11,870	740	10,440	9,930	510	110	110	S
Other physical scientists	1,470	1,340	130	1,090	1,010	80	S	S	S
Postsecondary teachers, physical and related sciences	20,760	18,480	2,270	18,030	16,210	1,820	400	340	60
Social and related scientists	88,000	57,030	30,980	79,200	51,350	27,850	2,840	1,650	1,190
Economists	5,380	4,280	1,100	4,460	3,540	910	160	120	S
Political scientists	820	610	220	790	580	210	S	S	S
Psychologists	37,370	20,560	16,810	34,910	19,480	15,430	890	350	540
Sociologists and anthropologists	2,470	1,460	1,010	2,190	1,300	890	70	50	S
S&T historians and other social scientists	1,720	1,040	680	1,600	970	630	S	S	S
Postsecondary teachers, social and related sciences	40,260	29,100	11,150	35,250	25,480	9,780	1,670	1,110	560
Engineers	55,550	52,510	3,040	38,960	36,920	2,040	690	630	60
Aerospace and related engineers	3,150	3,080	70	2,120	2,080	S	50	50	S
Chemical engineers	5,610	5,290	320	3,840	3,630	210	80	70	S
Civil and architectural engineers	2,460	2,380	90	1,480	1,420	60	S	S	S
Electric and related engineers	9,270	8,890	380	5,860	5,700	150	80	70	S
Industrial engineers	360	310	S	210	190	S	S	S	S
Mechanical engineers	5,090	4,970	130	3,040	2,980	60	S	S	S
Other engineers	13,980	12,670	1,290	10,280	9,390	900	120	100	S
Postsecondary teachers, engineering	15,660	14,910	740	12,130	11,530	600	310	290	S
Non-S&E occupations	140,240	110,950	29,300	121,980	96,530	25,430	3,600	2,320	1,280
Managers,administrators,etc.	90,400	76,200	14,200	79,120	66,800	12,320	2,300	1,590	700
Health and related occupations	12,570	8,620	3,950	10,670	7,200	3,460	280	190	100
Teachers, except S&E postsecondary teachers	16,150	9,370	6,790	13,980	8,120	5,860	550	200	350
Social services and related occupations	1,660	1,130	530	1,490	980	510	80	80	S
Technologists, etc.	4,820	4,330	500	3,790	3,410	380	50	S	S
Sales and marketing occupations	4,490	3,720	770	3,770	3,130	640	140	90	50
Other non-S&E occupations	10,140	7,580	2,560	9,150	6,890	2,260	210	140	70

See explanatory information and SOURCE at end of table.

Table 2[illegible] Employed doctoral scientists and engineers, by occupation, race/ethnicity, and sex: 1993

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Occupation	Hispanic			Asian			Native American		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	9,420	7,130	2,290	51,670	43,620	8,050	1,730	1,340	390
Scientists	5,840	4,300	1,540	25,270	19,860	5,410	1,110	870	240
Computer and mathematical scientists	850	760	90	5,700	4,870	830	100	90	S
Computer and information scientists	240	210	S	2,330	2,090	240	S	S	S
Mathematical scientists	80	70	S	860	680	180	S	S	S
Postsecondary teachers, computer and mathematical sciences	530	480	50	2,510	2,100	410	60	60	S
Life and related scientists	1,460	1,060	400	8,400	6,040	2,360	210	150	60
Agricultural scientists	150	140	S	660	580	80	S	S	S
Biological scientists	880	640	250	5,910	3,970	1,930	130	90	S
Forestry and conservation scientists	S	S	S	S	S	S	S	S	S
Postsecondary teachers, life and related sciences	420	280	140	1,810	1,470	340	50	S	S
Physical and related scientists	1,350	1,130	230	7,990	6,720	1,270	190	190	S
Chemists, except biochemists	430	350	70	3,580	2,890	690	S	S	S
Earth scientists	170	160	S	550	490	60	S	S	S
Physicists and astronomers	220	200	S	1,820	1,610	210	S	S	S
Other physical scientists	10	S	S	370	320	S	S	S	S
Postsecondary teachers, physical and related sciences	540	410	130	1,670	1,410	260	120	110	S
Social and related scientists	2,180	1,360	820	3,180	2,230	950	600	440	170
Economists	160	140	S	580	450	130	S	S	S
Political scientists	S	S	S	S	S	S	S	S	S
Psychologists	890	470	420	480	170	300	190	90	110
Sociologists and anthropologists	100	60	S	80	S	50	S	S	S
S&T historians and other social scientists	S	S	S	70	50	S	S	S	S
Postsecondary teachers, social and related sciences	990	660	330	1,970	1,530	440	370	320	50
Engineers	1,020	910	110	14,770	13,930	830	120	120	S
Aerospace and related engineers	S	S	S	950	930	S	S	S	S
Chemical engineers	120	100	S	1,570	1,490	80	S	S	S
Civil and architectural engineers	50	50	S	900	870	S	S	S	S
Electric and related engineers	120	110	S	3,170	2,950	220	50	50	S
Industrial engineers	S	S	S	130	110	S	S	S	S
Mechanical engineers	80	70	S	1,940	1,880	60	S	S	S
Other engineers	190	170	S	3,350	3,020	340	S	S	S
Postsecondary teachers, engineering	410	360	50	2,750	2,680	70	50	50	S
Non-S&E occupations	2,560	1,920	640	11,630	9,830	1,800	500	350	150
Managers,administrators,etc	1,600	1,290	300	7,010	6,230	770	380	280	100
Health and related occupations	240	190	60	1,320	1,000	320	60	S	S
Teachers, except S&E postsecondary teachers	430	200	230	1,150	840	310	50	S	S
Social services and related occupations	S	S	S	60	50	S	S	S	S
Technologists, etc.	60	60	S	930	820	110	S	S	S
Sales and marketing occupations	S	S	S	550	470	80	S	S	S
Other non-S&E occupations	160	130	S	610	410	200	S	S	S

KEY: S = Suppressed because fewer than 50 weighted cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible] and broad field of doctorate: 1993

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Characteristics	Total	Sciences	Computer and mathematical sciences	Life and related sciences	Physical and related sciences	Social and related sciences	Engineering
Total	462,870	387,440	27,940	124,580	98,530	136,680	75,120
	[Percentage distribution]						
Sex:							
Men	79.8	76.7	87.9	74.3	90.0	66.9	95.8
Women	20.2	23.3	12.1	25.7	10.0	33.1	4.3
Race/Ethnicity:							
White	84.3	86.9	80.5	87.3	84.4	89.7	71.0
Black	2.1	2.2	1.4	1.9	1.1	3.5	1.3
Hispanic	2.0	2.1	2.6	1.7	1.9	2.4	1.8
Asian/Pacific Islander	11.2	8.4	15.1	8.7	12.3	3.8	25.6
Native American	0.4	0.4	0.3	0.3	0.3	0.6	0.2
Age:							
Under 30	1.7	1.5	3.2	1.5	2.2	0.8	2.4
30-34	10.3	9.6	11.8	9.9	12.0	7.1	13.9
35-39	16.2	16.2	16.1	19.0	15.5	14.4	16.1
40-44	17.9	18.5	15.3	19.8	14.3	20.9	15.1
45-49	19.1	19.6	20.4	18.8	17.1	22.0	16.2
50-54	16.2	16.0	18.1	14.6	17.5	15.9	17.3
55-59	9.0	8.7	8.2	7.9	10.0	8.5	10.8
60-64	5.6	5.7	4.0	5.3	6.8	5.7	5.0
65-75	4.0	4.1	2.8	3.3	4.7	4.7	3.3
Citizenship status:							
U.S. total	91.8	93.4	86.0	94.2	92.0	95.3	83.7
U.S. native	81.5	85.2	75.1	85.9	81.0	89.5	62.4
U.S. naturalized	10.4	8.2	10.9	8.2	10.9	5.8	21.3
Non-U.S. total	8.2	6.6	14.0	5.8	8.0	4.7	16.3
Non-U.S., permanent resident	6.2	4.9	10.4	4.1	5.6	3.9	12.8
Non-U.S., temporary resident	1.9	1.7	3.5	1.7	2.4	0.7	3.4
Year of doctorate:							
1991-92 graduates	8.7	8.3	10.6	9.1	7.4	7.9	10.7
1985-90 graduates	22.2	22.0	22.1	23.6	19.2	22.5	23.3
1980-84 graduates	16.7	17.4	14.1	18.5	14.0	19.4	13.1
1970-79 graduates	32.7	32.9	32.5	31.6	31.6	35.0	31.7
1960-69 graduates	16.2	15.7	18.5	14.1	21.8	12.3	18.4
Pre-1960 graduates	3.6	3.7	2.2	3.2	6.1	2.8	2.8
Place of birth:							
U.S.	80.9	84.5	74.3	85.3	80.4	88.8	62.1
Canada	0.9	0.9	0.8	0.9	0.9	0.9	0.8
Latin & South America	1.2	1.1	1.5	1.0	1.1	1.2	1.5
North, Central, West Europe	2.5	2.6	2.9	2.2	2.9	2.7	1.7
Eastern Europe	1.2	1.1	2.1	0.8	1.4	0.9	2.0
Eastern Asia	6.8	5.1	9.7	5.3	7.9	1.9	15.9
Western Asia	5.1	3.5	7.1	3.3	4.5	2.3	13.6
Australasia	0.4	0.4	0.6	0.4	0.3	0.3	0.5
Africa	1.0	0.8	0.9	0.8	0.6	1.0	2.1

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible] and engineers by demographic characteristics and broad occupation: 1993

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Characteristics	Total	Scientists	Computer and mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Engineers	Non-S&E occupations
Total	462,870	267,070	34,440	80,960	63,660	88,000	55,550	140,240
	[Percentage distribution]							
Sex:								
Men	79.8	77.1	87.9	76.0	89.6	64.8	94.5	79.1
Women	20.2	22.9	12.1	24.0	10.4	35.2	5.5	20.9
Race/Ethnicity:								
White	84.3	85.9	79.2	86.1	83.7	90.0	70.1	87.0
Black	2.1	2.0	1.5	1.4	1.3	3.2	1.2	2.6
Hispanic	2.0	2.2	2.5	1.8	2.1	2.5	1.8	1.8
Asian/Pacific Islander	11.2	9.5	16.6	10.4	12.6	3.6	26.6	8.3
Native American	0.4	0.4	0.3	0.3	0.3	0.7	0.2	0.4
Age:								
Under 30	1.7	2.1	3.4	2.2	2.9	1.0	2.8	0.3
30-34	10.3	12.3	12.7	13.8	15.2	8.7	15.7	4.3
35-39	16.2	18.5	16.3	22.2	17.9	16.3	17.9	11.3
40-44	17.9	18.3	17.4	18.8	14.6	20.9	15.4	18.2
45-49	19.1	17.3	18.4	15.9	14.4	20.5	14.5	24.1
50-54	16.2	14.0	17.0	12.3	14.9	13.8	14.8	21.1
55-59	9.0	8.0	8.2	6.8	9.0	8.2	9.6	10.7
60-64	5.6	5.5	3.9	4.7	7.0	5.9	5.3	5.9
65-75	4.0	4.0	2.8	3.4	4.2	4.8	3.8	4.0
Citizenship status:								
U.S. total	91.8	91.8	85.4	92.3	90.6	94.9	81.7	95.8
U.S. native	81.5	83.6	72.9	84.5	80.6	89.2	61.4	85.3
U.S. naturalized	10.4	8.2	12.4	7.8	9.9	5.6	20.3	10.5
Non-U.S. total	8.2	8.2	14.6	7.7	9.5	5.1	18.3	4.2
Non-U.S., permanent resident	6.2	5.9	10.9	5.2	6.2	4.3	14.2	3.5
Non-U.S., temporary resident	1.9	2.2	3.7	2.4	3.2	0.8	4.0	0.6
Year of doctorate:								
1991-92 graduates	8.7	10.1	10.7	11.3	9.8	9.1	12.1	4.6
1985-90 graduates	22.2	25.0	23.5	26.8	23.5	24.9	26.0	15.3
1980-84 graduates	16.7	17.6	15.5	18.2	15.4	19.5	13.3	16.2
1970-79 graduates	32.7	29.0	31.3	27.5	26.0	31.6	29.3	41.0
1960-69 graduates	16.2	14.8	17.0	12.7	20.3	11.9	15.8	19.0
Pre-1960 graduates	3.6	3.5	2.1	3.5	5.0	2.9	3.5	3.8
Place of birth:								
U.S.	80.9	82.9	72.2	83.8	79.9	88.4	60.8	84.9
Canada	0.9	0.9	0.7	0.9	0.9	1.1	1.1	0.7
Latin & South America	1.2	1.3	1.2	1.0	1.4	1.4	1.5	0.9
North, Central, West Europe	2.5	2.7	3.2	2.4	2.5	2.7	2.0	2.3
Eastern Europe	1.2	1.1	2.4	0.7	1.4	0.9	1.8	1.2
Eastern Asia	6.8	5.9	10.6	6.7	8.1	1.7	17.3	4.5
Western Asia	5.1	4.0	7.9	3.4	4.9	2.4	13.0	4.2
Australasia	0.4	0.3	0.4	0.4	0.2	0.3	0.4	0.4
Africa	1.0	0.9	1.4	0.7	0.8	1.1	2.0	0.8

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible] recipients, by demographic characteristics [illegible]

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Characteristics	Total	U.S. Citizen			Non-U.S. Citizen		
		Total	Native	Naturalized	Total	Permanent resident	Temporary resident
Total	462,870	425,080	377,040	47,960	37,780	28,490	8,990
	[Percentage distribution]						
Sex:							
Men	79.8	79.5	78.8	84.7	83.2	83.0	83.5
Women	20.2	20.5	21.2	15.3	16.8	17.0	16.5
Race/Ethnicity:							
White	84.3	89.0	95.2	39.8	32.5	35.5	23.0
Black	2.1	1.8	1.8	2.3	4.7	4.9	3.8
Hispanic	2.0	1.6	1.4	4.6	4.7	5.1	3.9
Asian/Pacific Islander	11.2	7.0	1.1	53.1	58.0	54.5	69.3
Native American	0.4	0.4	0.4	S	S	S	S
Age:							
Under 30	1.7	1.3	1.4	0.6	5.4	2.7	13.7
30-34	10.3	8.7	9.2	5.0	27.8	23.8	40.6
35-39	16.2	14.9	15.2	12.7	30.5	31.7	27.3
40-44	17.9	18.2	18.1	19.2	15.0	16.6	9.8
45-49	19.1	19.9	19.9	20.0	9.6	11.0	5.0
50-54	16.2	17.1	17.1	17.2	6.9	8.3	2.6
55-59	9.0	9.5	9.1	12.8	2.9	3.6	0.8
60-64	5.6	6.0	5.9	6.9	1.3	1.4	S
65-75	4.0	4.3	4.1	5.6	0.7	0.9	S
Geographic division:							
New England	7.8	7.8	7.8	7.7	7.9	7.8	8.6
Middle Atlantic	17.4	17.1	16.6	20.9	20.7	20.8	20.5
East North Central	13.8	13.6	13.7	13.0	15.8	16.0	15.1
West North Central	6.0	6.1	6.3	3.9	4.9	4.7	5.7
South Atlantic	18.9	19.1	19.3	17.5	16.2	15.5	18.0
East South Central	4.1	4.2	4.3	3.5	3.0	2.8	3.7
West South Central	8.1	8.0	8.1	7.2	8.9	9.3	8.0
Mountain	6.3	6.6	7.0	3.5	3.7	4.0	2.6
Pacific	17.3	17.2	16.6	22.5	18.1	18.5	17.0
Other U.S.	0.4	0.3	0.3	0.4	0.7	0.5	1.0
Place of birth:							
U.S.	80.9	88.0	99.1	0.5	0.5	0.5	S
Canada	0.9	0.5	0.1	3.8	5.1	5.9	2.8
Latin & South America	1.2	0.7	0.1	5.7	6.4	6.8	5.1
North, Central, West Europe	2.5	1.8	0.3	13.3	10.3	11.2	7.3
Eastern Europe	1.2	1.0	S	8.5	3.9	3.9	4.0
Eastern Asia	6.8	4.2	0.2	35.8	36.4	31.4	52.3
Western Asia	5.1	3.0	0.1	25.5	29.7	32.4	21.0
Australasia	0.4	0.2	0.1	1.7	1.9	2.1	1.7
Africa	1.0	0.6	S	5.0	5.8	5.9	5.8

KEY: S = Suppressed because fewer than 50 cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

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Characteristics	Total	Universities and 4-year colleges	Other educational institutions	Private for-profit	Self-employed	Private not-for-profit	Federal government	State & government	Other sector
Total	462,870	210,070	11,720	141,190	28,270	23,610	33,800	12,810	1,390
	[Percentage distribution]								
Sex:									
Men	79.8	78.8	66.0	86.4	65.9	71.6	82.8	73.1	85.6
Women	20.2	21.2	34.0	13.6	34.2	28.5	17.2	26.9	14.4
Race/Ethnicity:									
White	84.3	85.1	87.1	79.8	93.0	87.0	88.4	86.0	69.8
Black	2.1	2.5	3.6	1.4	1.2	2.1	2.0	3.7	3.6
Hispanic	2.0	2.3	3.2	1.6	1.5	1.9	1.9	2.0	7.9
Asian/Pacific Islander	11.2	9.6	5.5	16.9	3.9	8.9	7.3	7.5	18.7
Native American	0.4	0.4	0.6	0.3	0.4	S	0.3	0.7	S
Age:									
Under 30	1.7	2.0	S	1.9	0.2	1.9	0.8	0.5	2.9
30-34	10.3	11.3	4.1	11.6	2.4	11.2	8.1	5.4	7.2
35-39	16.2	16.6	10.9	17.3	10.5	19.2	14.1	14.7	20.9
40-44	17.9	16.3	20.7	19.2	18.9	19.1	18.0	24.4	10.1
45-49	19.1	17.1	22.5	19.4	23.2	19.4	22.5	24.0	28.1
50-54	16.2	16.7	18.9	15.7	15.2	13.6	18.3	13.8	16.5
55-59	9.0	9.4	9.6	8.3	9.8	6.7	10.9	6.9	9.4
60-64	5.6	6.7	7.5	4.0	7.3	4.5	4.1	6.2	4.3
65-75	4.0	3.8	5.4	2.5	12.6	4.4	3.1	4.1	0.7
Citizenship status:									
U.S. total	91.8	90.8	95.2	90.3	96.7	93.9	98.3	95.1	56.1
U.S. native	81.5	82.0	87.9	76.2	89.2	84.8	89.0	85.2	48.9
U.S. naturalized	10.4	8.8	7.3	14.1	7.5	9.1	9.3	9.8	7.2
Non-U.S. total	8.2	9.2	4.8	9.7	3.3	6.1	1.6	4.8	44.6
Non-U.S., permanent resident	6.2	6.7	4.0	7.8	2.9	4.4	1.0	4.3	15.8
Non-U.S., temporary resident	1.9	2.4	0.8	1.9	0.4	1.6	0.6	0.5	23.7
Geographic division:									
New England	7.8	9.0	5.4	7.5	8.2	8.7	3.3	4.8	S
Middle Atlantic	17.4	15.7	23.0	21.8	19.5	18.5	3.9	20.1	11.5
East North Central	13.8	16.2	11.3	13.5	10.0	14.6	5.4	10.5	S
West North Central	6.0	7.8	4.0	5.0	4.2	3.8	2.8	4.7	S
South Atlantic	18.9	15.5	20.7	15.0	13.1	19.0	57.8	16.5	82.7
East South Central	4.1	5.4	1.9	3.1	3.1	3.3	3.2	1.6	0.7
West South Central	8.1	8.6	9.8	8.5	7.2	5.7	4.9	7.8	S
Mountain	6.3	6.8	5.8	5.4	6.2	6.1	7.0	8.7	0.7
Pacific	17.3	14.3	17.7	19.9	28.3	20.2	11.6	25.2	S
Other U.S.	0.4	0.5	0.5	0.2	S	S	0.1	0.2	4.3

See explanatory information and SOURCE at end of table.

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Characteristics	Total	Universities and 4-year colleges	Other educational institutions	Private for-profit	Self-employed	Private not-for-profit	Federal government	State & government	Other sector
	[Percentage distribution]								
Place of birth:									
U.S.	80.9	81.3	87.2	75.7	88.7	83.9	88.5	84.8	45.3
Canada	0.9	1.1	0.5	0.8	0.8	0.6	0.4	0.6	S
Latin & South America	1.2	1.3	1.7	1.1	0.7	1.3	0.7	0.5	10.1
North, Central, West Europe	2.5	2.8	1.5	2.0	2.9	2.5	1.7	3.1	12.2
Eastern Europe	1.2	1.3	1.5	1.1	1.5	1.4	0.9	1.0	2.9
Eastern Asia	6.8	5.8	2.6	10.7	2.4	5.1	4.5	3.8	5.0
Western Asia	5.1	4.9	3.7	7.0	2.1	3.7	2.8	4.0	15.1
Australasia	0.4	0.4	S	0.4	0.3	0.4	0.1	0.6	0.7
Africa	1.0	1.1	1.2	1.1	0.6	1.0	0.4	1.6	7.9

KEY: S = Suppressed because fewer than 50 cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible]

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Characteristics	Total	Research & development					Teaching	Management, sales, and administration	Computer applications	Prof. services/ other
		Total	Applied research	Basic research	Development	Design				
Total	462,870	191,120	92,960	64,460	23,720	10,440	101,220	81,590	18,680	70,250
	[Percentage distribution]									
Sex:										
Men	79.8	82.9	83.1	79.1	88.4	92.8	77.8	83.9	89.9	66.7
Women	20.2	17.1	16.9	20.9	11.6	7.2	22.2	16.1	10.1	33.3
Race/Ethnicity:										
White	84.3	80.8	81.8	82.5	74.9	74.9	86.3	87.2	74.8	90.3
Black	2.1	1.4	1.6	1.1	1.6	1.1	3.1	2.6	1.4	2.1
Hispanic	2.0	2.0	1.9	2.3	1.6	1.9	2.4	1.7	1.8	2.0
Asian/Pacific Islander	11.2	15.5	14.3	13.9	21.6	21.9	7.6	8.2	21.7	5.1
Native American	0.4	0.2	0.3	0.1	S	0.1	0.6	0.4	0.3	0.5
Age:										
Under 30	1.7	2.9	2.5	3.8	2.2	2.2	1.0	0.2	2.2	0.7
30-34	10.3	15.7	14.5	19.1	13.8	10.5	7.4	3.1	12.6	7.4
35-39	16.2	20.6	19.9	22.9	18.5	15.9	13.2	10.1	18.3	15.2
40-44	17.9	18.3	19.2	17.7	18.1	15.4	15.8	16.9	20.8	20.3
45-49	19.1	16.0	16.7	13.0	18.5	21.4	18.2	24.8	21.3	21.6
50-54	16.2	12.3	12.8	10.7	12.8	16.7	19.7	23.0	14.8	14.6
55-59	9.0	6.8	7.2	5.4	8.0	9.6	11.4	12.6	6.2	8.0
60-64	5.6	4.0	4.1	3.5	4.0	4.9	8.8	6.1	2.3	5.9
65-75	4.0	3.4	3.0	3.7	4.2	3.4	4.5	3.2	1.4	6.3
Citizenship status:										
U.S. total	91.8	88.1	89.6	86.7	86.9	86.6	92.7	96.8	85.5	96.7
U.S. native	81.5	76.3	78.0	77.4	70.0	68.9	84.1	86.1	71.5	88.9
U.S. naturalized	10.4	11.8	11.6	9.2	16.8	17.7	8.6	10.6	14.1	7.8
Non-U.S. total	8.2	11.9	10.4	13.3	13.1	13.4	7.3	3.2	14.5	3.3
Non-U.S., permanent resident	6.2	8.6	7.6	8.7	10.7	10.8	6.1	2.7	9.9	2.7
Non-U.S., temporary resident	1.9	3.3	2.8	4.5	2.4	2.6	1.1	0.5	4.4	0.5
Geographic division:										
New England	7.8	8.1	7.6	9.6	7.5	4.3	8.9	6.1	9.3	7.1
Middle Atlantic	17.4	17.7	17.5	17.2	19.6	17.7	16.5	16.3	17.5	18.9
East North Central	13.8	14.0	13.5	14.9	15.2	10.2	16.1	13.1	10.1	11.8
West North Central	6.0	5.5	5.5	6.1	4.9	3.2	8.2	5.0	4.1	5.5
South Atlantic	18.9	19.1	20.8	17.7	16.8	16.7	16.0	22.4	15.9	19.0
East South Central	4.1	3.4	3.3	4.0	2.3	3.4	5.7	4.3	2.7	3.8
West South Central	8.1	7.6	7.6	7.0	7.6	11.0	9.0	8.4	8.8	7.4
Mountain	6.3	6.4	7.1	5.8	5.2	6.3	6.3	6.6	5.8	6.2
Pacific	17.3	17.9	16.8	17.2	20.5	27.1	12.6	17.3	25.7	20.1
Other U.S.	0.4	0.3	0.2	0.4	0.5	0.1	0.6	0.4	S	0.3

See explanatory information and SOURCE at end of table.

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Characteristics	Total	Research & development: Total	Research & development: Applied research	Research & development: Basic research	Research & development: Development	Research & development: Design	Teaching	Management, sales, and administration	Computer applications	Prof. services/ other
	[Percentage distribution]									
Place of birth:										
U.S.	80.9	75.6	77.3	76.4	69.7	68.5	83.6	85.8	70.7	88.2
Canada	0.9	1.1	0.8	1.4	0.9	1.3	0.8	0.6	0.7	0.9
Latin & South America	1.2	1.4	1.4	1.3	1.2	1.5	1.3	0.8	0.9	1.1
North, Central, West Europe	2.5	2.7	2.1	3.8	2.5	1.6	2.2	2.3	2.2	2.5
Eastern Europe	1.2	1.4	1.3	1.6	1.5	0.6	1.1	1.0	1.7	1.2
Eastern Asia	6.8	10.0	8.7	9.6	14.9	13.5	3.8	4.5	15.7	2.9
Western Asia	5.1	6.4	6.6	4.9	7.6	10.9	5.3	4.1	6.1	2.3
Australasia	0.4	0.4	0.3	0.3	0.5	0.5	0.4	0.4	0.5	0.3
Africa	1.0	1.1	1.4	0.6	1.2	1.4	1.5	0.7	1.4	0.6

KEY: S = Suppressed because fewer than 50 cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible]

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Characteristics	Total Total	 Male	 Female	White Total	 Male	 Female	Black Total	 Male	 Female
Total	462,870	369,260	93,610	390,430	310,650	79,770	9,620	6,520	3,100
	[Percentage distribution]								
Age:									
Under 30	1.7	1.5	2.4	1.4	1.2	2.2	0.8	0.9	S
30-34	10.3	9.4	13.9	9.3	8.4	12.7	9.8	8.4	12.6
35-39	16.2	15.0	21.0	15.4	14.0	20.5	17.7	15.5	22.3
40-44	17.9	17.0	21.7	17.8	16.7	22.1	21.6	19.5	26.1
45-49	19.1	19.0	19.2	19.7	19.7	19.8	20.5	21.0	19.7
50-54	16.2	17.6	10.8	16.9	18.3	11.1	13.7	15.5	10.0
55-59	9.0	9.9	5.5	9.2	10.2	5.6	7.7	9.5	3.9
60-64	5.6	6.2	3.4	5.9	6.6	3.5	5.0	5.5	3.9
65-75	4.0	4.4	2.2	4.3	4.8	2.4	3.2	4.3	S
Citizenship status:									
U.S. total	91.8	91.5	93.2	96.9	96.8	97.2	81.6	76.1	93.2
U.S. native	81.5	80.5	85.3	91.9	91.6	93.2	70.0	61.7	87.4
U.S. naturalized	10.4	11.0	7.9	4.9	5.1	4.0	11.6	14.4	5.8
Non-U.S. total	8.2	8.5	6.8	3.1	3.2	2.8	18.4	23.9	6.8
Non-U.S., permanent resident	6.2	6.4	5.2	2.6	2.6	2.4	14.6	19.5	4.2
Non-U.S., temporary resident	1.9	2.0	1.6	0.5	0.6	0.4	3.5	4.0	2.6
Geographic division:									
New England	7.8	7.5	9.0	8.0	7.7	9.2	5.4	5.2	5.8
Middle Atlantic	17.4	16.9	19.1	17.1	16.5	19.2	16.2	16.3	16.1
East North Central	13.8	13.9	13.3	13.9	14.0	13.6	11.6	12.7	9.4
West North Central	6.0	6.1	5.5	6.2	6.4	5.8	4.3	5.2	2.3
South Atlantic	18.9	18.8	19.1	19.0	19.0	18.8	32.5	31.4	34.8
East South Central	4.1	4.3	3.2	4.2	4.4	3.2	6.9	7.5	5.5
West South Central	8.1	8.4	6.6	7.9	8.2	6.4	8.9	8.7	9.4
Mountain	6.3	6.6	5.2	6.8	7.2	5.3	2.3	2.3	2.3
Pacific	17.3	17.0	18.5	16.8	16.4	18.2	11.6	10.3	14.8
Other U.S.	0.4	0.4	0.4	0.2	0.2	0.2	S	S	S
Place of birth:									
U.S.	80.9	79.9	84.5	91.3	91.0	92.2	69.8	61.5	87.1
Canada	0.9	0.9	1.0	1.0	1.0	1.1	S	S	S
Latin & South America	1.2	1.1	1.4	0.3	0.2	0.3	7.3	7.5	7.1
North, Central, West Europe	2.5	2.4	2.7	2.8	2.8	3.0	S	S	S
Eastern Europe	1.2	1.3	0.9	1.4	1.5	1.1	S	S	S
Eastern Asia	6.8	7.2	5.5	0.2	0.2	0.2	S	S	S
Western Asia	5.1	5.7	2.8	2.2	2.4	1.4	S	S	S
Australasia	0.4	0.3	0.7	0.2	0.2	0.3	S	S	S
Africa	1.0	1.1	0.6	0.6	0.7	0.4	21.7	29.1	5.8

See explanatory information and SOURCE at end of table.

[illegible]

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Characteristics	Hispanic Total	Hispanic Male	Hispanic Female	Asian Total	Asian Male	Asian Female	Native American Total	Native American Male	Native American Female
Total	9,420	7,130	2,290	51,670	43,620	8,050	1,730	1,340	390
	[Percentage distribution]								
Age:									
Under 30	2.0	1.8	2.6	3.4	3.2	4.8	S	S	S
30-34	15.7	14.6	19.2	17.2	15.8	24.8	3.5	3.7	S
35-39	20.2	18.4	25.8	21.8	21.3	23.9	12.1	11.2	15.4
40-44	18.4	17.8	20.5	18.1	18.4	16.6	15.0	13.4	20.5
45-49	16.7	17.1	15.3	14.2	14.3	13.8	22.0	18.7	33.3
50-54	14.5	16.7	7.9	12.3	13.0	8.6	21.4	23.1	15.4
55-59	6.5	7.2	4.8	7.9	8.4	5.1	9.2	9.7	S
60-64	3.5	3.9	2.6	3.4	3.7	2.1	11.6	13.4	S
65-75	2.4	2.7	S	1.7	2.0	S	2.9	3.7	S
Citizenship status:									
U.S. total	81.0	80.4	83.0	57.6	57.9	56.0	98.8	98.5	100.0
U.S. native	57.1	55.5	62.0	8.3	7.4	13.2	95.4	95.5	94.9
U.S. naturalized	23.7	24.7	20.5	49.3	50.5	42.9	2.9	S	S
Non-U.S. total	19.0	19.6	17.0	42.4	42.1	44.0	S	S	S
Non-U.S., permanent resident	15.3	15.7	13.5	30.1	29.9	30.8	S	S	S
Non-U.S., temporary resident	3.7	3.9	3.1	12.1	11.9	12.9	S	S	S
Geographic division:									
New England	7.5	8.0	6.1	6.9	6.5	9.1	6.9	7.5	S
Middle Atlantic	14.5	13.5	17.9	20.5	20.7	19.3	8.7	7.5	12.8
East North Central	9.3	9.7	8.3	14.4	14.5	14.0	15.6	18.7	S
West North Central	4.8	5.0	3.5	4.4	4.2	5.2	6.4	7.5	S
South Atlantic	18.4	18.4	18.3	16.0	16.0	15.9	9.8	8.2	17.9
East South Central	3.0	3.6	S	3.2	3.3	2.5	9.2	9.0	S
West South Central	10.3	10.8	8.7	8.6	8.9	7.0	17.9	20.1	S
Mountain	8.1	7.4	10.0	3.3	3.2	3.9	12.1	13.4	S
Pacific	17.3	17.1	17.5	22.4	22.3	23.0	12.7	9.0	25.6
Other U.S.	7.0	6.6	8.3	0.3	0.3	S	S	S	S
Place of birth:									
U.S.	55.7	53.9	61.6	8.2	7.4	12.3	95.4	95.5	94.9
Canada				0.1	0.1	S	S	S	S
Latin & South America	38.7	39.7	35.4	0.3	0.3	0.6	S	S	S
North, Central, West Europe	3.4	3.8	2.2	0.2	0.2	S	S	S	S
Eastern Europe		S	S	0.1	S	S	S	S	S
Eastern Asia	0.6	0.8	S	59.7	59.2	62.4	S	S	S
Western Asia	0.4	0.4	S	29.4	31.4	18.5	2.9	3.0	S
Australasia	0.4	0.6	S	1.7	1.2	4.8	S	S	S
Africa	0.5	0.7	S	0.3	0.2	0.9	S	S	S

KEY: S = Suppressed because fewer than 50 cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table [illegible]. Employed doctoral scientists and engineers, by employment-related characteristics, race/ethnicity, and sex: 1993

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Characteristics	Total			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	462,870	369,260	93,610	390,430	310,650	79,770	9,620	6,520	3,100
	[Percentage distribution]								
Sector of employment:									
Universities and 4-year colleges	45.4	44.8	47.6	45.8	45.5	47.1	54.1	53.5	54.8
Other educational institutions	2.5	2.1	4.3	2.6	2.2	4.3	4.4	3.7	5.5
Private-for-profit	30.5	33.0	20.6	28.9	31.2	19.7	20.3	22.4	15.8
Self-employed	6.1	5.0	10.3	6.7	5.5	11.4	3.6	3.1	4.8
Private not-for-profit	5.1	4.6	7.2	5.3	4.7	7.5	5.1	5.8	3.9
Federal government	7.3	7.6	6.2	7.7	8.0	6.2	7.2	6.4	8.4
State and local government	2.8	2.5	3.7	2.8	2.6	3.6	5.0	4.3	6.5
Other sector	0.3	0.3	0.2	0.2	0.3	0.1	S	0.8	S
Primary work activity:									
R&D	41.3	42.9	34.9	39.6	41.2	33.1	28.4	29.8	25.5
Applied research	20.1	20.9	16.8	19.5	20.4	15.9	15.8	16.4	14.8
Basic research	13.9	13.8	14.4	13.6	13.6	13.8	7.4	7.5	7.1
Development	5.0	5.6	2.9	4.5	4.9	2.7	3.8	4.1	3.2
Design	2.3	2.6	0.8	2.0	2.3	0.7	1.2	1.7	S
Teaching	21.9	21.3	24.0	22.4	21.9	24.2	32.2	32.1	32.6
Management, sales, and administration	17.6	18.5	14.1	18.2	19.2	14.3	21.7	22.7	19.7
Computer applications	4.0	4.5	2.0	3.6	4.1	1.7	2.7	3.2	1.9
Professional services/other	15.2	12.7	25.0	16.3	13.6	26.7	15.1	12.4	20.3
Federal support:									
Receiving support	26.1	26.8	23.2	26.0	26.8	22.8	20.8	21.3	19.7
Not receiving support	72.7	72.1	74.7	72.8	72.2	75.1	77.8	77.1	79.0
Status unknown	1.3	1.1	2.1	1.2	1.0	2.1	1.5	1.5	S
Relationship between degree/job									
Closely related	67.3	66.3	71.2	67.3	66.2	71.5	74.0	72.4	77.4
Somewhat related	25.1	25.9	22.1	25.0	25.8	21.8	20.7	22.2	17.7
Not related	7.6	7.8	6.7	7.7	8.0	6.6	5.3	5.4	4.8

See explanatory information and SOURCE at end of table.

Table [illegible]. Employed doctoral scientists and engineers, by employment-related characteristics, race/ethnicity, and sex: 1993

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Characteristics	Hispanic			Asian			Native American		
	Total	Male	Female	Total	Male	Female	Total	Male	Femal
Total	9,420	7,130	2,290	51,670	43,620	8,050	1,730	1,340	390
	[Percentage distribution]								
Sector of employment:									
Universities and 4-year colleges	51.8	49.2	59.8	39.2	38.0	46.1	51.4	53.7	43.6
Other educational institutions	3.9	2.8	7.4	1.3	1.1	2.1	4.0	3.7	S
Private-for-profit	24.4	28.5	11.8	46.2	48.4	34.0	23.1	24.6	15.4
Self-employed	4.6	3.8	7.0	2.1	2.1	2.4	6.9	5.2	S
Private not-for-profit	4.8	4.3	6.1	4.0	3.8	5.6	S	S	S
Federal government	6.8	7.9	3.1	4.8	4.6	5.8	6.4	6.0	S
State and local government	2.7	2.4	3.5	1.9	1.6	3.1	5.2	3.7	S
Other sector	1.2	1.1	S	0.5	0.5	0.7	S	S	S
Primary work activity:									
R&D	41.0	43.6	32.8	57.3	57.3	57.1	25.4	26.9	23.1
Applied research	19.0	20.2	15.3	25.7	25.6	26.5	18.5	19.4	S
Basic research	15.8	16.4	14.0	17.4	16.3	23.5	4.0	S	S
Development	4.0	4.5	3.1	9.7	10.6	5.0	S	S	S
Design	2.1	2.7	S	4.4	4.8	2.2	S	S	S
Teaching	25.4	22.9	33.2	15.0	14.7	16.6	35.3	40.3	17.9
Management, sales, and administration	14.9	16.5	9.6	12.9	13.4	10.4	17.3	16.4	20.5
Computer applications	3.6	4.3	S	7.9	8.3	5.7	S	S	S
Professional services/other	15.2	12.6	23.1	7.0	6.4	10.1	19.1	13.4	38.5
Federal support:									
Receiving support	27.5	29.2	22.3	27.5	27.3	28.6	17.9	17.2	20.5
Not receiving support	70.4	69.1	74.7	71.0	71.3	69.1	79.8	79.9	79.5
Status unknown	2.1	1.8	3.1	1.6	1.4	2.2	S	S	S
Relationship between degree/job									
Closely related	71.4	70.1	75.5	65.0	65.3	63.6	73.4	70.9	84.6
Somewhat related	23.2	24.3	20.5	27.6	27.5	28.1	20.2	21.6	S
Not related	5.3	5.6	4.4	7.4	7.2	8.4	5.8	6.7	S

KEY: S = Suppressed because fewer than 50 cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

[illegible]
sector of employment: [illegible]

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Characteristics	Total	Universities and 4-year colleges	Other educational institutions	Private for-profit	Self-employed	Private not-for-profit	Federal government	State & local government	Other sector
Total	462,870	210,070	11,720	141,190	28,270	23,610	33,800	12,810	1,390
	[Percentage distribution]								
Field of doctorate:									
Sciences	83.8	88.2	96.7	71.8	91.2	90.4	86.0	94.8	98.6
Computer and mathematical sciences	6.0	8.2	5.5	5.2	2.2	3.2	3.3	0.7	S
Computer and information sciences	1.1	1.2	0.6	1.7	0.2	0.4	0.3	S	S
Mathemathical sciences	4.9	7.1	4.9	3.5	2.0	2.8	3.0	0.6	S
Life and related sciences	26.9	31.9	23.7	20.9	13.7	27.1	34.6	25.3	10.1
Agricultural and food sciences	3.3	3.4	2.7	3.3	2.2	1.9	4.9	1.9	S
Biological and health sciences	22.8	27.8	20.5	17.0	11.2	25.0	26.7	20.5	5.8
Environmental sciences	0.8	0.7	0.5	0.6	0.3	S	2.9	3.0	S
Physical and related sciences	21.3	17.3	18.7	30.9	9.4	17.2	24.2	10.1	3.6
Chemistry, except biochemistry	11.2	7.4	11.2	20.7	4.7	6.0	7.3	4.1	S
Geology and oceanography	2.7	2.7	2.0	2.2	1.5	2.4	6.4	3.4	S
Physics and astronomy	7.2	7.1	5.5	7.9	3.1	8.6	9.9	1.8	S
Other physical sciences (incl. earth)	0.2	0.2	S	0.1	S	0.3	0.7	0.9	S
Social and related sciences	29.5	30.8	48.7	14.7	65.9	42.9	23.8	58.8	82.7
Economics	4.2	5.6	2.2	1.7	3.2	3.0	6.0	3.2	63.3
Political and related sciences	3.1	4.4	3.8	0.9	2.5	3.4	2.8	5.0	10.1
Psychology	15.3	11.1	33.0	9.5	55.4	27.8	9.7	38.3	S
Sociology and anthropology	4.3	6.2	6.3	1.2	3.0	6.0	3.3	7.3	6.5
Other social sciences	2.6	3.5	3.3	1.4	1.7	2.7	2.0	5.0	S
Engineering	16.2	11.8	3.3	28.2	8.9	9.6	14.0	5.1	1.4
Aerospace/aeronautical	0.7	0.5	S	0.9	0.8	0.3	1.1	S	S
Chemical	2.4	1.1	0.6	5.4	1.4	1.4	1.3	S	S
Civil	1.5	1.4	S	1.9	1.1	0.7	1.7	2.4	S
Electrical/computer	4.2	2.9	0.7	7.8	1.9	2.2	2.8	0.6	S
Industrial	0.4	0.5	S	0.4	S	S	0.3	S	S
Mechanical	2.0	1.5	0.6	3.5	0.8	1.6	1.7	0.4	S
Other engineering	5.0	3.8	1.1	8.2	2.7	3.1	5.0	1.6	0.7
Year of doctorate:									
1991-92 graduates	8.7	9.7	8.7	7.9	3.6	11.7	8.3	7.9	10.1
1985-90 graduates	22.2	22.7	21.0	21.9	16.4	26.4	21.3	25.1	25.2
1980-84 graduates	16.7	15.1	18.5	18.1	20.7	17.2	15.1	20.8	13.7
1970-79 graduates	32.7	30.6	37.8	34.1	34.0	30.3	37.9	34.4	36.7
1960-69 graduates	16.2	18.3	10.9	15.1	16.6	10.8	15.3	9.8	12.2
Pre-1960 graduates	3.6	3.7	3.2	2.9	8.8	3.6	2.2	2.0	S

See explanatory information and SOURCE at end of table.

[illegible] Table [illegible] scientists and engineers, by employment-related characteristics and [illegible] of employment: 1993

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Characteristics	Total	Universities and 4-year colleges	Other educational institutions	Private for-profit	Self-employed	Private not-for-profit	Federal government	State & local government	Other sector
	[Percentage distribution]								
Primary work activity:									
R&D	41.3	39.3	4.6	50.9	15.4	43.0	53.3	24.1	37.4
Applied research	20.1	14.6	2.1	28.6	8.6	22.5	33.6	16.4	30.9
Basic research	13.9	23.5	1.4	3.5	1.5	15.4	15.9	4.3	S
Development	5.0	0.8	0.8	13.2	3.4	3.6	2.3	2.1	S
Design	2.3	0.4	S	5.6	1.8	1.4	1.5	1.2	S
Teaching	21.9	43.6	63.7	0.6	1.4	2.1	0.9	S	S
Management, sales, and administration	17.6	10.4	12.5	24.7	11.3	25.1	28.1	33.1	33.8
Computer applications	4.0	1.3	S	8.9	3.3	3.4	3.3	3.9	S
Professional services/other	15.2	5.3	18.8	14.9	68.6	26.4	14.4	38.5	24.5

KEY: S = Suppressed because fewer than 50 cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table [illegible]. Employed doctoral scientists and engineers, by employment-related characteristics and primary work activity: 1993

Page 1 of 1

Characteristics	Total	Research & development					Teaching	Management, sales, and administration	Computer applications	Prof. Services/ Other
		Total	Applied research	Basic research	Development	Design				
Total	462,870	191,120	92,960	64,460	23,720	10,440	101,220	81,590	18,680	70,250
	[Percentage distribution]									
Field of doctorate:										
Sciences	83.8	80.6	79.5	94.2	62.4	46.8	88.0	80.8	67.3	94.1
Computer and mathematical sciences	6.0	4.4	4.0	5.4	2.2	6.2	11.5	4.2	18.6	1.6
Computer and information sciences	1.1	1.0	1.1	1.0	0.6	1.1	1.3	0.7	6.2	0.1
Mathemathical sciences	4.9	3.3	2.9	4.3	1.6	5.2	10.1	3.5	12.4	1.4
Life and related sciences	26.9	33.5	29.5	49.1	17.0	8.6	21.6	25.9	10.2	22.5
Agricultural and food sciences	3.3	4.2	5.7	2.3	4.4	1.4	2.0	4.1	1.8	2.0
Biological and health sciences	22.8	28.5	22.6	46.4	12.0	6.7	18.9	20.3	8.0	20.0
Environmental sciences	0.8	0.8	1.2	0.3	0.6	0.5	0.7	1.5	0.4	0.5
Physical and related sciences	21.3	27.3	27.7	24.5	34.9	23.9	16.4	22.6	26.2	9.3
Chemistry, except biochemistry	11.2	14.7	16.4	10.4	23.2	7.2	7.8	13.0	7.4	5.3
Geology and oceanography	2.7	3.3	3.4	4.2	1.5	1.4	2.7	2.5	3.0	1.2
Physics and astronomy	7.2	9.0	7.6	9.6	9.9	14.9	5.7	6.8	15.5	2.6
Other physical sciences (incl. earth)	0.2	0.3	0.3	0.3	S	S	0.2	0.3	S	0.2
Social and related sciences	29.5	15.5	18.3	15.3	8.4	8.1	38.6	28.1	12.4	60.8
Economics	4.2	3.4	4.7	2.6	1.2	1.3	7.1	4.6	1.1	2.6
Political and related sciences	3.1	1.5	1.6	1.6	0.9	1.0	6.5	3.7	0.9	2.4
Psychology	15.3	6.2	7.2	5.9	4.1	4.4	11.7	12.1	6.3	51.6
Sociology and anthropology	4.3	2.8	3.1	3.4	1.0	0.9	8.4	4.8	1.9	2.3
Other social sciences	2.6	1.5	1.6	1.8	1.1	0.6	5.0	2.9	2.3	1.9
Engineering	16.2	19.4	20.5	5.7	37.6	53.2	12.0	19.2	32.7	5.9
Aerospace/aeronautical	0.7	0.7	0.9	0.1	1.2	0.9	0.6	0.8	1.8	0.2
Chemical	2.4	3.3	3.3	0.7	7.9	9.1	0.9	3.3	3.6	0.7
Civil	1.5	1.6	1.8	0.3	1.3	8.7	1.6	1.6	2.5	0.8
Electrical/computer	4.2	4.7	4.5	1.4	10.8	14.4	3.2	5.0	12.1	1.1
Industrial	0.4	0.2	0.3	0.1	S	0.6	0.8	0.4	1.2	0.2
Mechanical	2.0	2.4	2.2	0.9	5.5	5.6	1.7	2.6	3.9	0.6
Other engineering	5.0	6.5	7.5	2.2	10.7	13.8	3.3	5.4	7.5	2.3
Year of doctorate:										
1991-92 graduates	8.7	12.1	11.5	14.4	9.7	8.8	6.8	2.8	11.1	8.2
1985-90 graduates	22.2	27.3	27.7	28.9	24.5	20.6	20.0	11.9	24.0	22.7
1980-84 graduates	16.7	17.1	17.5	17.0	16.9	14.9	14.5	15.7	18.4	19.3
1970-79 graduates	32.7	27.0	27.7	23.0	30.6	38.6	34.4	43.6	33.6	32.5
1960-69 graduates	16.2	12.8	12.5	12.8	14.0	13.3	20.6	22.4	11.8	13.0
Pre-1960 graduates	3.6	3.5	3.1	3.9	4.2	3.7	3.7	3.6	1.2	4.2
Sector of employment:										
Universities and 4-yr colleges	45.4	43.2	33.1	76.5	7.1	8.8	90.6	26.9	14.2	16.0
Other educational institutions	2.5	0.3	0.3	0.2	0.4	0.5	7.4	1.8	0.3	3.1
Private-for-profit	30.5	37.6	43.4	7.7	80.2	75.7	0.8	42.8	67.2	30.0
Self-employed	6.1	2.3	2.6	0.7	4.2	5.0	0.4	3.9	5.0	27.6
Private not-for-profit	5.1	5.3	5.7	5.6	3.7	3.3	0.5	7.3	4.3	8.9
Federal government	7.3	9.4	12.2	8.3	3.3	4.9	0.3	11.6	6.0	6.9
State and local government	2.8	1.6	2.3	0.9	1.2	1.5	S	5.2	2.7	7.0
Other sector	0.3	0.3	0.5	0.1	S	S	S	0.6	S	0.5

KEY: S = Suppressed because fewer than 50 cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 37. Employed doctoral scientists and engineers, by field of doctorate and broad occupation: 1993

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Field of doctorate	Total	Computer and mathematical scientists		Life and related scientists		Physical and related scientists		Social and related scientists		Engineers		Non-S&E Occupations				
		Non-Teacher	Postsec. Teacher	Non-Teacher	Postsec. Teacher	Non-Teacher	Postsec. Teacher	Non-Teacher	Postsec. Teacher	Non-Teacher	Postsec. Teacher	Total	Managers	Health	Teacher	Other
Total (number)	462,870	16,950	17,490	51,750	29,220	42,900	20,760	47,750	40,260	39,900	15,660	140,240	90,400	12,570	16,150	21,120
(percent)	100.0	3.7	3.8	11.2	6.3	9.3	4.5	10.3	8.7	8.6	3.4	30.3	19.5	2.7	3.5	4.6
Sciences	387,740	13,180	16,060	51,370	28,940	40,600	20,470	47,700	40,210	8,230	1,440	119,540	73,460	12,180	15,490	18,410
	100.0	3.4	4.1	13.2	7.5	10.5	5.3	12.3	10.4	2.1	0.4	30.8	18.9	3.1	4.0	4.7
Computer and mathematical sciences	27,940	6,630	14,150	70	S	150	60	50	100	840	270	5,600	3,690	100	500	1,310
	100.0	23.7	50.6	0.3		0.5	0.2	0.2	0.4	3.0	1.0	20.0	13.2	0.4	1.8	4.7
Computer and information sciences	5,140	1,980	1,810	S	S	S	S	S	S	160	50	1,060	550	S	170	330
	100.0	38.5	35.2							3.1	1.0	20.6	10.7		3.3	6.4
Mathematical sciences	22,800	4,650	12,340	60	S	140	60	S	70	680	220	4,540	3,140	90	330	980
	100.0	20.4	54.1	0.3		0.6	0.3		0.3	3.0	1.0	19.9	13.8	0.4	1.4	4.3
Life and related sciences	124,580	1,220	420	45,440	26,140	2,000	1,720	600	330	1,120	160	45,430	24,310	9,190	6,460	5,470
	100.0	1.0	0.3	36.5	21.0	1.6	1.4	0.5	0.3	0.9	0.1	36.5	19.5	7.4	5.2	4.4
Agricultural and food sciences	15,100	90	S	6,130	2,940	430	210	60	S	120	S	5,060	3,300	380	300	1,080
	100.0	0.6		40.6	19.5	2.8	1.4	0.4		0.8		33.5	21.9	2.5	2.0	7.2
Biological and health sciences	105,630	1,020	360	38,280	22,500	1,450	1,320	460	240	830	150	39.030	19,950	8,740	6,130	4,200
	100.0	1.0	0.3	36.2	21.3	1.4	1.2	0.4	0.2	0.8	0.1	36.9	18.9	8.3	5.8	4.0
Environmental sciences	3,850	100	S	1,040	700	120	180	80	90	170	S	1,350	1,060	70	S	190
	100.0	2.6		27.0	18.2	3.1	4.7	2.1	2.3	4.4		35.1	27.5	1.8		4.9
Physical and related sciences	98,530	2,620	620	4,220	1,130	38,230	18,300	110	50	5,780	980	26,490	19,650	1,240	940	4,670
	100.0	2.7	0.6	4.3	1.1	38.8	18.6	0.1	0.1	5.9	1.0	26.9	19.9	1.3	1.0	4.7
Chemistry, except biochemistry	51,760	730	120	3,290	720	20,430	8,520	S	S	2,110	200	15,600	11,660	850	580	2,510
	100.0	1.4	0.2	6.4	1.4	39.5	16.5			4.1	0.4	30.1	22.5	1.6	1.1	4.8
Geology and oceanography	12,500	180	50	150	200	5,690	3,090	S	S	400	90	2,650	2,080	S	80	490
	100.0	1.4	0.4	1.2	1.6	45.5	24.7			3.2	0.7	21.2	16.6		0.6	3.9

See explanatory information and SOURCE at end of table.

Table 37. Employed doctoral scientists and engineers, by field of doctorate and broad occupation: 1993

Field of doctorate	Total	Computer and mathematical scientists		Life and related scientists		Physical and related scientists		Social and related scientists		Engineers		Non-S&E Occupations				
		Non-Teacher	Postsec. Teacher	Non-Teacher	Postsec. Teacher	Non-Teacher	Postsec. Teacher	Non-Teacher	Postsec. Teacher	Non-Teacher	Postsec. Teacher	Total	Managers	Health	Teacher	Other
Physics and astronomy (number)	33,150	1,710	460	530	140	11,800	6,520	90	50	3,160	670	8,030	5,770	340	280	1,640
(percent)	100.0	5.2	1.4	1.6	0.4	35.6	19.7	0.3	0.2	9.5	2.0	24.2	17.4	1.0	0.8	4.9
Other physical sciences (incl. earth)	1,120	S	S	250	70	310	170	S	S	100	S	200	130	S	S	S
	100.0			22.3	6.3	27.7	15.2			8.9		17.9	11.6			
Social and related sciences	136,680	2,710	870	1,640	1,630	210	390	46,950	39,730	500	S	42,020	25,810	1,660	7,590	6,960
	100.0	2.0	0.6	1.2	1.2	0.2	0.3	34.4	29.1	0.4		30.7	18.9	1.2	5.6	5.1
Economics	19,410	160	110	80	240	S	S	4,600	7,970	S	S	6,220	4,030	60	1,480	650
	100.0	0.8	0.6	0.4	1.2			23.7	41.1			32.0	20.8	0.3	7.6	3.3
Polical and related sciences	14,290	130	60	S	S	S	S	1,300	7,150	80	S	5,560	3,620	150	750	1,030
	100.0	0.9	0.4					9.1	50.0	0.6		38.9	25.3	1.0	5.2	7.2
Psychology	71,020	1,200	100	1,290	580	S	S	37,160	13,320	310	S	16,980	11,470	1,090	1,860	2,560
	100.0	1.7	0.1	1.8	0.8			52.3	18.8	0.4		23.9	16.2	1.5	2.6	3.6
Sociology and anthropology	19,790	530	130	140	140	S	S	2,950	8,840	50	S	6,950	4,010	230	1,290	1,430
	100.0	2.7	0.7	0.7	0.7			14.9	44.7	0.3		35.1	20.3	1.2	6.5	7.2
Other social sciences	12,170	690	480	130	660	100	360	940	2,450	50	S	6,310	2,680	130	2,220	1,280
	100.0	5.7	3.9	1.1	5.4	0.8	3.0	7.7	20.1	0.4		51.8	22.0	1.1	18.2	10.5
Engineering	75,120	3,770	1,430	380	280	2,300	290	50	50	31,660	14,210	20,710	16,940	390	660	2,710
	100.0	5.0	1.9	0.5	0.4	3.1	0.4	0.1	0.1	42.1	18.9	27.6	22.6	0.5	0.9	3.6
Aerospace/aeronautical	3,050	100	S	S	S	S	S	S	S	1,400	680	820	690	S	S	120
	100.0	3.3								45.9	22.3	26.9	22.6			3.9
Chemical	11,140	240	60	60	50	250	S	S	S	5,690	1,300	3,430	2,860	50	S	470
	100.0	2.2	0.5	0.5	0.4	2.2				51.1	11.7	30.8	25.7	0.4		4.2
Civil	7,060	190	70	S	S	180	S	S	S	2,790	2,280	1,520	1,420	S	S	60
	100.0	2.7	1.0			2.5				39.5	32.3	21.5	20.1			0.8

See explanatory information and SOURCE at end of table.

Table 37. Employed doctoral scientists and engineers, by field of doctorate and broad occupation: 1993

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Field of doctorate	Total	Computer and mathematical scientists		Life and related scientists		Physical and related scientists		Social and related scientists		Engineers		Non-S&E Occupations				
		Non-Teacher	Postsec. Teacher	Non-Teacher	Postsec. Teacher	Non-Teacher	Postsec. Teacher	Non-Teacher	Postsec. Teacher	Non-Teacher	Postsec. Teacher	Total	Managers	Health	Teacher	Other
Electrical/computer (number)	19,410	1,820	700	S	S	430	S	S	S	7,060	3,550	5,720	4,560	120	50	990
(percent)	100.0	9.4	3.6			2.2				36.4	18.3	29.5	23.5	0.6	0.3	5.1
Industrial	1,900	210	70	S	S	S	S	S	S	280	680	590	370	S	150	60
	100.0	11.1	3.7							14.7	35.8	31.1	19.5		7.9	3.2
Mechanical	9,470	240	S	S	S	260	S	S	S	4,420	2,110	2,350	2,140	S	S	170
	100.0	2.5				2.7				46.7	22.3	24.8	22.6			1.8
Other engineering	23,100	980	470	260	150	1,160	170	S	S	10,020	3,600	6,280	4,900	160	380	840
	100.0	4.2	2.0	1.1	0.6	5.0	0.7			43.4	15.6	27.2	21.2	0.7	1.6	3.6

KEY: S = Suppressed because fewer than 50 cases reported (See NOTE below)

NOTE: All numbers in the table are estimates derived from a sample.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table [illegible]. Median annual salaries of doctoral scientists and engineers, by field of doctorate, race/ethnicity, and sex: 1993

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Field of doctorate	Total			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	$60,000	$61,500	$48,400	$60,200	$62,400	$48,600	$51,000	$52,700	$47,600
Sciences	56,500	60,200	48,000	57,600	60,500	48,200	50,400	52,000	47,300
Computer and mathematical sciences	57,800	58,800	51,700	59,600	60,200	52,000	53,200	53,900	M
Computer and information sciences	60,800	63,000	53,100	60,900	62,500	53,400	M	M	M
Mathemathical sciences	56,500	57,200	50,300	58,100	59,100	51,100	52,000	52,400	M
Life and related sciences	55,000	58,200	47,400	55,500	59,400	48,000	50,100	52,300	47,200
Agricultural and food sciences	53,100	54,800	42,800	53,900	55,200	43,500	51,000	52,600	M
Biological and health sciences	55,100	59,400	47,900	55,600	60,100	48,200	50,100	52,400	47,200
Environmental sciences	57,500	58,600	44,600	58,100	59,000	45,200	M	M	M
Physical and related sciences	64,100	65,500	52,500	65,500	66,600	53,500	54,600	56,000	50,200
Chemistry, except biochemistry	64,100	65,800	52,500	65,700	67,400	53,700	51,600	54,100	M
Geology and oceanography	60,100	60,500	51,100	60,300	60,600	53,000	M	M	M
Physics and astronomy	66,400	67,000	54,800	68,000	68,700	55,800	62,900	62,600	M
Other physical sciences (incl. earth)	48,500	48,900	41,600	48,500	48,900	M	M	M	M
Social and related sciences	52,100	55,300	46,600	52,500	55,800	46,900	49,500	50,500	46,500
Economics	61,400	62,500	53,800	62,900	65,000	55,500	50,400	52,000	M
Political and related sciences	52,200	52,900	48,400	52,600	54,600	48,500	52,800	54,700	49,300
Psychology	51,700	55,100	47,200	52,000	55,300	47,200	51,500	52,200	50,500
Sociology and anthropology	48,100	50,300	43,600	48,600	50,600	43,800	43,900	43,400	45,200
Other social sciences	50,200	51,900	44,300	50,500	54,000	45,500	44,800	M	43,400
Engineering	69,000	70,000	58,500	70,800	72,000	57,900	60,800	61,500	M
Aerospace/aeronautical	68,800	68,700	M	70,500	70,500	M	M	M	M
Chemical	72,000	72,600	59,600	73,200	75,200	60,400	M	M	M
Civil	63,700	63,900	53,400	65,100	65,200	M	M	M	M
Electrical/computer	72,500	72,800	62,500	75,200	75,400	60,800	66,000	67,600	M
Industrial	60,900	62,400	52,000	62,700	65,000	52,300	M	M	M
Mechanical	66,400	66,600	62,600	70,100	70,200	M	M	M	M
Other engineering	66,600	67,600	56,400	69,900	70,500	55,600	70,100	70,400	M

See explanatory information and SOURCE at end of table.

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Field of doctorate	Hispanic			Asian			Native American		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	$53,500	$56,500	$43,700	$57,800	$60,100	$48,000	$55,000	$55,700	$45,500
Sciences	51,800	55,200	43,000	52,400	54,800	47,000	52,800	55,600	45,200
Computer and mathematical sciences	55,100	55,200	M	54,300	54,600	50,600	M	M	M
Computer and information sciences	60,100	60,200	M	62,200	63,400	53,100	M	M	M
Mathemathical sciences	50,600	50,800	M	48,800	48,800	49,000	M	M	M
Life and related sciences	50,500	55,000	40,400	50,500	52,800	43,500	55,000	60,100	M
Agricultural and food sciences	51,700	52,400	M	49,200	49,700	40,100	M	M	M
Biological and health sciences	50,300	55,600	40,300	50,900	53,500	44,300	59,000	60,800	M
Environmental sciences									
Physical and related sciences	57,800	59,100	46,000	57,300	59,400	51,000	60,000	60,100	M
Chemistry, except biochemistry	57,100	57,600	36,800	57,800	60,400	51,300	57,700	57,600	M
Geology and oceanography	60,400	63,200	M	54,500	56,100	44,400	M	M	M
Physics and astronomy	61,400	60,700	M	56,600	58,000	48,200	M	M	M
Other physical sciences(incl. earth)	M	M	M	M	M	M	M	M	M
Social and related sciences	48,500	50,700	43,600	46,600	48,800	44,300	46,400	46,600	45,300
Economics	65,200	60,900	M	50,000	50,200	48,100	M	M	M
Political and related sciences	47,800	45,500	M	40,600	40,900	M	M	M	M
Psychology	49,800	53,400	46,200	46,200	48,400	46,100	55,800	M	M
Sociology and anthropology	43,000	45,400	39,800	40,600	40,900	38,500	50,000	M	M
Other social sciences	40,600	43,100	39,600	50,200	51,400	39,800	M	M	M
Engineering	60,800	60,800	56,900	64,700	65,000	60,100	60,400	M	M
Aerospace/aeronautical	M	M	M	56,900	56,800	M	M	M	M
Chemical	58,500	55,900	M	68,900	69,800	M	M	M	M
Civil	M	M	M	60,900	63,600	M	M	M	M
Electrical/computer	63,400	63,500	M	67,100	67,400	64,700	M	M	M
Industrial	M	M	M	56,700	57,400	M	M	M	M
Mechanical	56,500	M	M	60,400	60,500	M	M	M	M
Other engineering	63,000	60,900	M	61,100	61,700	60,200	M	M	M

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 39. Median annual salaries of doctoral scientists and engineers, by occupation, race/ethnicity, and sex: 1993

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Occupation	Total			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	$60,000	$61,500	$48,400	$60,200	$62,400	$48,600	$51,000	$52,700	$47,600
Scientists	52,700	55,400	45,200	53,400	55,800	45,400	48,000	48,900	44,900
Computer and mathematical scientists	57,400	58,300	49,800	58,100	59,800	49,900	51,500	51,600	45,500
Computer and information scientists	67,800	68,200	64,500	68,500	69,100	64,300	M	M	M
Mathematical scientists	64,800	65,400	55,900	65,900	66,200	60,200	M	M	M
Postsecondary teachers, computer and mathematical sciences	50,200	50,700	45,100	50,800	51,500	45,800	51,000	51,200	M
Life and related scientists	50,800	53,400	43,300	51,800	54,200	44,200	47,600	48,700	44,100
Agricultural scientists	52,600	54,400	45,800	53,100	54,900	45,700	M	M	M
Biological scientists	50,600	54,100	42,100	51,900	55,400	43,000	48,800	55,200	42,300
Forestry and conservation scientists	52,900	53,400	M	52,800	53,300	M	M	M	M
Postsecondary teachers, life and related sciences	50,800	52,700	44,800	50,900	52,800	45,000	46,000	45,100	46,600
Physical and related scientists	58,700	60,100	50,700	60,200	60,600	51,200	48,900	50,300	M
Chemists, except biochemists	61,700	63,000	55,200	63,700	65,100	55,900	56,200	56,000	M
Earth scientists	60,800	61,700	53,600	62,000	62,500	57,300	M	M	M
Physicists and astronomers	65,300	65,600	58,700	67,200	67,300	61,200	58,600	58,500	M
Other physical scientists	65,900	66,500	M	65,800	67,400	M	M	M	M
Postsecondary teachers, physical and related sciences	50,100	50,700	38,600	50,400	51,000	38,400	42,700	42,600	M
Social and related scientists	49,300	50,900	44,000	49,900	51,400	44,000	45,800	46,400	45,200
Economists	70,200	71,000	60,600	70,600	72,300	61,300	M	M	M
Political scientists	60,300	60,700	M	60,300	M	M	M	M	M
Psychologists	50,200	52,200	46,100	50,200	52,500	45,700	50,900	M	52,800
Sociologists and anthropologists	53,000	55,700	48,700	54,600	56,400	50,200	M	M	M
S&T historians and other social scientists	45,200	47,700	42,400	43,900	47,600	40,400	M	M	M
Postsecondary teachers, social and related sciences	46,900	49,300	42,200	47,600	50,100	42,300	42,800	44,600	46,700
Engineers	64,700	65,100	58,000	65,600	65,900	57,700	60,200	60,400	M
Aerospace and related engineers	67,400	68,100	M	70,700	71,200	M	M	M	M
Chemical engineers	65,700	65,800	62,800	67,500	68,500	61,800	M	M	M
Civil and architectural engineers	60,100	60,300	M	63,500	64,900	M	M	M	M
Electric and related engineers	72,100	72,300	64,900	72,900	73,200	60,900	67,500	M	M
Industrial engineers	65,300	66,000	M	M	M	M	M	M	M
Mechanical engineers	64,400	64,700	M	67,200	67,400	M	M	M	M
Other engineers	64,100	65,100	59,100	65,300	65,900	60,300	63,000	M	M
Postsecondary teachers, engineering	60,200	60,400	50,400	60,800	61,300	50,500	50,000	50,000	M
Non-S&E occupations	72,000	76,300	53,600	72,500	77,300	53,900	60,000	65,100	50,400
Managers, administrators, etc.	80,100	82,400	62,100	80,200	82,500	62,100	65,700	70,400	58,100
Health and related occupations	55,500	64,500	47,700	55,900	65,200	48,200	47,200	47,800	M
Teachers, except S&E postsecondary teachers	49,600	52,600	45,300	50,200	54,700	45,600	45,600	48,700	44,800
Social services and related occupations	35,900	36,800	32,300	35,800	36,400	30,900	M	M	M
Technologists, etc.	60,700	61,100	40,900	60,700	61,400	40,100	M	M	M
Sales and marketing occupations	72,800	72,900	67,700	75,500	75,700	75,000	M	M	M
Other non-S&E occupations	52,500	52,700	50,900	54,700	55,000	52,500	M	M	M

See explanatory information and SOURCE at end of table.

Table 39 Median annual salaries of doctoral scientists and engineers, by occupation, race ethnicity, and sex: 1993

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Occupation	Hispanic			Asian			Native American		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	$53,500	$56,500	$43,700	$57,800	$60,100	$48,000	$55,000	$55,700	$45,500
Scientists	50,100	51,400	41,000	50,600	51,900	44,700	45,600	46,400	41,900
Computer and mathematical scientists	50,600	50,600	51,500	55,900	57,000	50,200	M	M	M
Computer and information scientists	65,300	65,600	M	66,300	66,400	66,200	M	M	M
Mathematical scientists	M	M	M	56,800	57,900	55,100	M	M	M
Postsecondary teachers, computer and mathematical sciences	48,200	48,200	M	45,800	47,100	43,100	M	M	M
Life and related scientists	45,600	50,500	36,100	48,100	50,100	40,200	45,400	45,700	M
Agricultural scientists	51,300	51,400	M	50,900	51,100	M	M	M	M
Biological scientists	45,000	51,200	35,800	43,000	47,400	38,400	45,900	M	M
Forestry and conservation scientists	M	M	M	M	M	M	M	M	M
Postsecondary teachers, life and related sciences	40,700	45,200	34,900	53,600	55,200	45,100	M	M	M
Physical and related scientists	54,300	56,000	36,800	52,300	54,100	50,300	57,400	57,500	M
Chemists, except biochemists	56,100	57,000	M	55,900	57,400	51,900	M	M	M
Earth scientists	63,700	64,000	M	46,000	46,900	M	M	M	M
Physicists and astronomers	64,400	64,400	M	50,200	50,500	47,200	M	M	M
Other physical scientists	M	M	M	66,000	66,200	M	M	M	M
Postsecondary teachers, physical and related sciences	49,500	50,600	35,400	46,700	48,000	40,800	M	M	M
Social and related scientists	46,400	48,800	43,400	44,300	44,600	44,200	45,200	46,100	M
Economists	M	M	M	62,700	65,100	46,800	M	M	M
Political scientists	M	M	M	M	M	M	M	M	M
Psychologists	51,000	46,900	51,600	46,700	41,800	47,600	M	M	M
Sociologists and anthropologists	M	M	M	M	M	M	M	M	M
S&T historians and other social scientists	M	M	M	M	M	M	M	M	M
Postsecondary teachers, social and related sciences	43,800	45,600	38,400	42,400	42,400	42,400	46,300	46,600	M
Engineers	59,600	59,900	56,500	62,000	62,200	59,600	M	M	M
Aerospace and related engineers	M	M	M	62,400	62,500	M	M	M	M
Chemical engineers	M	M	M	63,400	62,600	M	M	M	M
Civil and architectural engineers	M	M	M	55,100	55,200	M	M	M	M
Electric and related engineers	M	M	M	70,200	70,300	65,900	M	M	M
Industrial engineers	M	M	M	M	M	M	M	M	M
Mechanical engineers	M	M	M	60,300	60,400	M	M	M	M
Other engineers	58,900	61,900	M	60,700	62,400	48,600	M	M	M
Postsecondary teachers, engineering	52,200	50,800	M	55,100	55,200	M	M	M	M
Non-S&E occupations	65,400	75,400	47,600	71,400	75,300	54,500	62,100	62,300	M
Managers, administrators, etc.	79,900	82,800	59,800	84,300	85,500	68,600	62,700	62,600	M
Health and related occupations	60,500	60,800	M	54,400	62,200	44,700	M	M	M
Teachers, except S&E postsecondary teachers	39,700	38,700	40,600	48,700	50,100	39,700	M	M	M
Social services and related occupations	M	M	M	M	M	M	M	M	M
Technologists, etc.	M	M	M	60,500	60,800	M	M	M	M
Sales and marketing occupations	M	M	M	68,400	68,600	M	M	M	M
Other non-S&E occupations	M	M	M	50,200	52,700	M	M	M	M

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 40. Median annual salaries of doctoral scientists and engineers, by field of doctorate and sector of employment: 1993

Page 1 of 1

Field of doctorate	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Private not-for-profit	Federal government	State & local government	Other sector
Total	$60,000	$51,100	$45,500	$71,900	$58,600	$62,900	$48,600	$90,800
Sciences	56,500	50,300	45,800	70,800	56,700	62,200	48,600	90,800
Computer and mathematical sciences	57,800	51,100	46,500	75,400	75,900	65,500	M	M
Computer and information sciences	60,800	53,700	M	74,500	M	M	M	M
Mathemathical sciences	56,500	50,400	46,000	75,700	75,800	65,300	M	M
Life and related sciences	55,000	50,200	40,700	68,700	56,700	58,700	49,300	M
Agricultural and food sciences	53,100	50,200	40,400	59,400	54,900	53,800	M	M
Biological and health sciences	55,100	50,200	40,700	70,500	56,700	58,600	50,700	M
Environmental sciences	57,500	50,300	M	66,700	M	62,000	42,500	M
Physical and related sciences	64,100	51,300	45,800	72,000	62,900	66,900	47,400	M
Chemistry, except biochemistry	64,100	48,500	45,300	70,600	62,000	63,500	53,300	M
Geology and oceanography	60,100	50,600	M	70,400	60,200	67,100	45,400	M
Physics and astronomy	66,400	57,500	47,700	75,100	68,300	69,400	M	M
Other physical sciences (incl. earth)	48,500	41,700	M	M	M	M	M	M
Social and related sciences	52,100	50,000	49,000	70,400	53,000	62,600	48,500	100,200
Economics	61,400	55,100	M	90,600	83,600	71,800	50,700	101,200
Political and related sciences	52,200	48,700	44,900	90,700	60,000	79,000	45,600	M
Psychology	51,700	48,500	50,300	65,900	52,400	59,000	49,500	M
Sociology and anthropology	48,100	46,700	42,900	52,100	48,500	57,100	42,100	M
Other social sciences	50,200	47,400	44,300	67,800	46,800	70,400	43,900	M
Engineering	69,000	61,200	36,500	72,800	75,400	70,600	48,200	M
Aerospace/aeronautical	68,800	62,300	M	71,800	M	74,200	M	M
Chemical	72,000	62,400	M	75,200	68,800	66,300	M	M
Civil	63,700	60,100	M	70,000	M	70,200	48,200	M
Electrical/computer	72,500	62,000	M	76,100	77,100	76,100	M	M
Industrial	60,900	58,000	M	68,100	M	M	M	M
Mechanical	66,400	59,300	M	70,700	85,000	68,600	M	M
Other engineering	66,600	63,600	M	70,300	74,000	69,300	M	M

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 41. Median annual salaries of doctoral scientists and engineers by occupation and sector of employment: 1993

Page 1 of 1

Occupation	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Private not-for-profit	Federal government	State & local government	Other sector
Total	$60,000	$51,100	$45,500	$71,900	$58,600	$62,900	$48,600	$90,800
Scientists	52,700	48,600	45,200	65,700	53,200	58,400	45,800	90,200
Computer and mathematical scientists	57,400	50,600	45,100	70,000	69,600	60,800	41,300	M
Computer and information scientists	67,800	58,400	M	70,000	70,000	60,600	M	M
Mathematical scientists	64,800	52,000	M	70,500	69,500	62,100	M	M
Postsecondary teachers, computer and mathematical sciences	50,200	50,400	45,200	M	M	M	M	M
Life and related scientists	50,800	48,600	40,400	62,300	49,800	52,900	41,100	M
Agricultural scientists	52,600	50,100	M	58,500	M	52,700	M	M
Biological scientists	50,600	40,100	M	63,100	49,400	52,900	41,500	M
Forestry and conservation scientists	52,900	M	M	M	M	54,400	M	M
Postsecondary teachers, life and related sciences	50,800	51,300	40,100	M	M	M	M	M
Physical and related scientists	58,700	50,000	46,100	66,100	60,200	62,900	42,900	M
Chemists, except biochemists	61,700	36,400	M	64,700	58,300	56,400	M	M
Earth scientists	60,800	47,100	M	67,100	58,600	65,100	M	M
Physicists and astronomers	65,300	55,200	M	70,400	62,100	67,500	M	M
Other physical scientists	65,900	62,300	M	66,100	M	M	M	M
Postsecondary teachers, physical and related sciences	50,100	50,200	46,000	M	M	M	M	M
Social and related scientists	49,300	47,000	47,300	63,200	50,200	59,000	48,100	90,500
Economists	70,200	60,400	M	80,300	M	63,700	M	98,100
Political scientists	60,300	M	M	M	M	M	M	M
Psychologists	50,200	43,400	48,600	60,200	49,900	56,600	48,000	M
Sociologists and anthropologists	53,000	53,900	M	M	50,200	M	M	M
S&T historians and other social scientists	45,200	40,700	M	45,500	M	M	M	M
Postsecondary teachers, social and related sciences	46,900	47,000	45,200	M	M	M	M	M
Engineers	64,700	60,100	M	68,100	70,200	62,300	44,400	M
Aerospace and related engineers	67,400	60,900	M	70,300	M	62,100	M	M
Chemical engineers	65,700	54,700	M	65,900	M	M	M	M
Civil and architectural engineers	60,100	M	M	60,500	M	68,500	44,900	M
Electric and related engineers	72,100	61,400	M	72,600	77,300	65,900	M	M
Industrial engineers	65,300	M	M	66,400	M	M	M	M
Mechanical engineers	64,400	54,900	M	65,400	M	61,900	M	M
Other engineers	64,100	53,600	M	66,100	62,300	59,300	M	M
Postsecondary teachers, engineering	60,200	60,300	M	M	M	M	M	M
Non-S&E occupations	72,000	62,200	48,100	85,600	63,300	73,700	51,400	M
Managers, administrators,etc.	80,100	72,500	58,400	90,600	70,200	75,900	55,300	M
Health and related occupations	55,500	47,300	M	75,200	56,000	53,000	45,900	M
Teachers, except S&E postsecondary teachers	49,600	50,500	39,700	M	M	M	M	M
Social services and related occupations	35,900	M	M	M	33,600	M	M	M
Technologists, etc.	60,700	41,700	M	62,000	M	65,600	M	M
Sales and marketing occupations	72,800	M	M	72,600	M	M	M	M
Other non-S&E occupations	52,500	39,500	M	62,100	46,700	65,700	42,100	M

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 42. Median annual salaries of doctoral scientists and engineers, by field of doctorate and primary work activity: 1993

Page 1 of 1

Field of doctorate	Total	R&D	Teaching	Management, sales, and administration	Computer applications	Other
Total	$60,000	$60,600	$48,200	$76,000	$62,600	$55,600
Sciences	56,500	59,000	46,600	72,700	62,000	54,500
Computer and mathematical sciences	57,800	62,400	48,100	85,500	67,600	70,000
Computer and information sciences	60,800	65,600	50,500	78,200	69,200	M
Mathemathical sciences	56,500	60,900	47,700	87,700	67,100	66,900
Life and related sciences	55,000	54,200	45,700	70,000	50,200	59,700
Agricultural and food sciences	53,100	52,000	46,500	65,600	50,100	52,200
Biological and health sciences	55,100	54,700	45,700	70,700	50,200	60,500
Environmental sciences	57,500	57,800	46,200	65,100	M	55,100
Physical and related sciences	64,100	63,600	48,200	80,700	63,300	66,800
Chemistry, except biochemistry	64,100	63,200	45,000	80,600	60,200	69,100
Geology and oceanography	60,100	60,300	48,600	76,600	58,800	52,100
Physics and astronomy	66,400	66,300	50,800	84,300	67,100	71,300
Other physical sciences (incl. earth)	48,500	51,000	M	M	M	M
Social and related sciences	52,100	56,700	46,300	65,800	57,300	50,600
Economics	61,400	64,900	50,700	86,400	M	85,700
Political and related sciences	52,200	53,800	45,900	70,900	M	73,000
Psychology	51,700	57,500	45,400	60,900	60,900	50,100
Sociology and anthropology	48,100	48,800	45,200	60,300	M	47,900
Other social sciences	50,200	55,400	44,500	64,500	52,800	42,500
Engineering	69,000	66,900	57,600	90,700	63,300	71,100
Aerospace/aeronautical	68,800	65,600	62,800	104,100	60,000	M
Chemical	72,000	67,300	56,400	90,600	67,900	66,700
Civil	63,700	63,800	55,700	85,300	55,100	69,400
Electrical/computer	72,500	72,200	58,500	96,400	67,200	80,000
Industrial	60,900	63,500	53,100	112,500	M	M
Mechanical	66,400	65,200	53,700	90,000	65,200	M
Other engineering	66,600	65,300	60,100	87,900	60,600	75,200

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 43. Median annual salaries of doctoral scientists and engineers, by occupation and primary work activity: 1993

Page 1 of 1

Occupation	Total	R&D	Teaching	Management, sales, and administration	Computer applications	Other
Total	$60,000	$60,600	$48,200	$76,000	$62,600	$55,600
Scientists	52,700	56,600	46,400	61,700	62,000	52,200
Computer and mathematical scientists	57,400	64,200	48,700	66,900	65,000	62,900
Computer and information scientists	67,800	72,400	M	66,800	65,300	67,000
Mathematical scientists	64,800	65,600	M	77,200	60,700	62,900
Postsecondary teachers, computer and mathematical sciences	50,200	53,200	48,700	62,700	M	M
Life and related scientists	50,800	52,000	46,000	60,200	53,600	55,700
Agricultural scientists	52,600	52,400	M	51,200	M	54,700
Biological scientists	50,600	50,200	51,500	60,700	52,600	52,100
Forestry and conservation scientists	52,900	54,700	M	M	M	M
Postsecondary teachers, life and related sciences	50,800	55,900	45,800	60,300	M	79,400
Physical and related scientists	58,700	61,600	46,500	64,300	60,500	65,500
Chemists, except biochemists	61,700	61,700	M	60,500	M	66,100
Earth scientists	60,800	61,500	M	63,400	60,300	M
Physicists and astronomers	65,300	64,500	M	70,700	62,000	71,100
Other physical scientists	65,900	65,400	M	M	M	M
Postsecondary teachers, physical and related sciences	50,100	58,000	46,100	60,800	M	M
Social and related scientists	49,300	52,800	45,800	58,700	45,200	50,300
Economists	70,200	66,200	M	75,300	M	76,600
Political scientists	60,300	56,100	M	M	M	M
Psychologists	50,200	52,700	M	54,000	M	49,500
Sociologists and anthropologists	53,000	54,700	M	M	M	M
S&T historians and other social scientists	45,200	43,500	M	M	M	M
Postsecondary teachers, social and related sciences	46,900	50,600	45,800	54,900	M	50,600
Engineers	64,700	65,600	58,700	73,300	62,800	69,400
Aerospace and related engineers	67,400	68,600	M	M	64,100	M
Chemical engineers	65,700	65,600	M	75,400	63,100	M
Civil and architectural engineers	60,100	60,800	M	M	47,600	60,900
Electric and related engineers	72,100	72,100	M	80,000	69,300	M
Industrial engineers	65,300	M	M	M	M	M
Mechanical engineers	64,400	63,500	M	M	62,400	M
Other engineers	64,100	63,700	M	72,800	61,500	63,100
Postsecondary teachers, engineering	60,200	62,300	58,800	75,400	M	M
Non-S&E occupations	72,000	73,800	48,200	80,200	64,000	60,400
Managers, administrators, etc.	80,100	80,800	52,100	80,700	74,600	72,800
Health and related occupations	55,500	57,500	48,200	58,800	M	53,500
Teachers, except S&E postsecondary teachers	49,600	57,200	46,700	53,100	M	55,100
Social services and related occupations	35,900	M	M	M	M	36,700
Technologists, etc.	60,700	61,700	M	M	60,000	M
Sales and marketing occupations	72,800	95,000	M	73,300	M	M
Other non-S&E occupations	52,500	56,100	55,900	47,900	M	54,200

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 44. Median annual salaries of doctoral scientists and engineers, by sector of employment, field of doctorate, and sex: 1993

Page 1 of 2

Sector/field of doctorate	Total	Male	Female
All sectors:			
Total	$60,000	$61,500	$48,400
Sciences	56,500	60,200	48,000
Computer and mathematical sciences	57,800	58,800	51,700
Life and related sciences	55,000	58,200	47,400
Physical and related sciences	64,100	65,500	52,500
Social and related sciences	52,100	55,300	46,600
Engineering	69,000	70,000	58,500
Universities and 4-year colleges:			
Total	51,100	54,000	43,300
Sciences	50,300	52,300	43,000
Computer and mathematical sciences	51,100	51,800	45,900
Life and related sciences	50,200	52,700	42,700
Physical and related sciences	51,300	53,600	39,000
Social and related sciences	50,000	51,400	43,600
Engineering	61,200	62,100	50,600
Other educational institutions:			
Total	45,500	47,600	42,000
Sciences	45,800	48,100	42,000
Computer and mathematical sciences	46,500	48,100	M
Life and related sciences	40,700	44,400	36,400
Physical and related sciences	45,800	48,200	40,100
Social and related sciences	49,000	50,500	45,000
Engineering	36,500	36,200	M
Private-for-profit:			
Total	71,900	72,800	60,700
Sciences	70,800	72,700	60,600
Computer and mathematical sciences	75,400	75,800	70,700
Life and related sciences	68,700	70,700	60,700
Physical and related sciences	72,000	72,600	61,300
Social and related sciences	70,400	74,900	55,700
Engineering	72,800	73,300	62,700
Private not-for-profit:			
Total	58,600	61,900	52,000
Sciences	56,700	60,200	51,800
Computer and mathematical sciences	75,900	76,500	M
Life and related sciences	56,700	60,000	54,000
Physical and related sciences	62,900	63,300	58,400
Social and related sciences	53,000	55,400	49,900
Engineering	75,400	76,200	M

See explanatory information and SOURCE at end of table.

Table 44. Median annual salaries of doctoral scientists and engineers, by sector of employment, field of doctorate, and sex: 1993

Page 2 of 2

Sector/field of doctorate	Total	Male	Female
Federal government:			
Total	$62,900	$65,200	$54,700
Sciences	62,200	63,600	54,500
Computer and mathematical sciences	65,500	65,500	M
Life and related sciences	58,700	60,600	50,300
Physical and related sciences	66,900	67,500	54,900
Social and related sciences	62,600	64,400	59,800
Engineering	70,600	71,400	58,000
State and local government:			
Total	48,600	48,800	48,000
Sciences	48,600	48,900	48,000
Computer and mathematical sciences	M	M	M
Life and related sciences	49,300	49,400	48,800
Physical and related sciences	47,400	47,400	M
Social and related sciences	48,500	48,800	47,300
Engineering	48,200	48,100	M
Other sector:			
Total	90,800	100,500	75,300
Sciences	90,800	100,600	75,300
Computer and mathematical sciences	M	M	M
Life and related sciences	M	M	M
Physical and related sciences	M	M	M
Social and related sciences	100,200	106,100	75,800
Engineering	M	M	M

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salar

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 45. Median annual salaries of doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 1993

Page 1 of 2

Sector/occupation	Total	Male	Female
All sectors:			
Total	$60,000	$61,500	$48,400
Scientists	52,700	55,400	45,200
Computer and mathematical scientists	57,400	58,300	49,800
Life and related scientists	50,800	53,400	43,300
Physical and related scientists	58,700	60,100	50,700
Social and related scientists	49,300	50,900	44,000
Engineers	64,700	65,100	58,000
Non-S&E occupations	72,000	76,300	53,600
Universities and 4-year colleges:			
Total	51,100	54,000	43,300
Scientists	48,600	50,500	41,[illegible]00
Computer and mathematical scientists	50,600	51,200	45,900
Life and related scientists	48,600	50,700	40,200
Physical and related scientists	50,000	50,600	39,100
Social and related scientists	47,000	50,000	42,200
Engineers	60,100	60,400	50,000
Non-S&E occupations	62,200	67,900	49,500
Other educational institutions:			
Total	45,500	47,600	42,000
Scientists	45,200	46,900	41,700
Computer and mathematical scientists	45,100	43,500	M
Life and related scientists	40,400	43,400	33,200
Physical and related scientists	46,100	48,000	M
Social and related scientists	47,300	50,100	42,500
Engineers	M	M	M
Non-S&E occupations	48,100	49,800	44,000
Private-for-profit:			
Total	71,900	72,800	60,700
Scientists	65,700	67,300	57,300
Computer and mathematical scientists	70,000	70,200	68,500
Life and related scientists	62,300	63,800	57,800
Physical and related scientists	66,100	67,600	57,900
Social and related scientists	63,200	72,000	50,500
Engineers	68,100	68,900	62,600
Non-S&E occupations	85,600	88,500	70,300

See explanatory information and SOURCE at end of table.

Table [illegible]. Median annual salaries of doctoral scientists and engineers, by sector of employment, broad occupation, and sex: 1993

Page 2 of 2

Sector/occupation	Total	Male	Female
Private not-for-profit:			
Total	$58,600	$61,900	$52,000
Scientists	53,200	55,900	46,800
Computer and mathematical scientists	69,600	69,900	M
Life and related scientists	49,800	52,900	40,800
Physical and related scientists	60,200	60,300	58,900
Social and related scientists	50,200	51,500	46,400
Engineers	70,200	73,600	M
Non-S&E occupations	63,300	67,300	55,500
Federal government:			
Total	62,900	65,200	54,700
Scientists	58,400	60,000	51,600
Computer and mathematical scientists	60,800	61,000	M
Life and related scientists	52,900	55,500	48,100
Physical and related scientists	62,900	64,400	54,100
Social and related scientists	59,000	59,300	57,200
Engineers	62,300	62,700	55,800
Non-S&E occupations	73,700	75,600	62,600
State and local government:			
Total	48,600	48,800	48,000
Scientists	45,800	45,600	46,500
Computer and mathematical scientists	41,300	M	M
Life and related scientists	41,100	41,300	M
Physical and related scientists	42,900	42,700	M
Social and related scientists	48,100	48,300	46,700
Engineers	44,400	44,900	M
Non-S&E occupations	51,400	52,300	49,800
Other sector:			
Total	90,800	100,500	75,300
Scientists	90,200	90,700	M
Computer and mathematical scientists	M	M	M
Life and related scientists	M	M	M
Physical and related scientists	M	M	M
Social and related scientists	90,500	100,000	M
Engineers	M	M	M
Non-S&E occupations	M	M	M

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 46. Median annual salaries of doctoral scientists and engineers, by sector of employment, field of doctorate, and race/ethnicity: 1993

Page 1 of 2

Sector/field of doctorate	Total	White	Black	Hispanic	Asian or Pacific Islander	Native American
All sectors:						
Total	$60,000	$60,200	$51,000	$53,500	$57,800	$55,000
Sciences	56,500	57,600	50,400	51,800	52,400	52,800
Computer and mathematical sciences	57,800	59,600	53,200	55,100	54,300	M
Life and related sciences	55,000	55,500	50,100	50,500	50,500	55,000
Physical and related sciences	64,100	65,500	54,600	57,800	57,300	60,000
Social and related sciences	52,100	52,500	49,500	48,500	46,600	46,400
Engineering	69,000	70,800	60,800	60,800	64,700	60,400
Universities and 4-year colleges:						
Total	51,100	52,200	48,000	45,900	46,000	46,400
Sciences	50,300	50,800	47,300	45,100	42,600	46,100
Computer and mathematical sciences	51,100	52,100	50,900	50,000	46,300	M
Life and related sciences	50,200	50,700	47,300	44,100	42,600	45,600
Physical and related sciences	51,300	53,500	48,600	48,300	40,300	M
Social and related sciences	50,000	50,300	45,900	43,500	42,300	46,100
Engineering	61,200	63,700	51,400	50,800	54,600	M
Other educational institutions:						
Total	45,500	45,800	42,300	50,700	42,200	M
Sciences	45,800	46,000	42,300	55,900	42,100	M
Computer and mathematical sciences	46,500	47,100	M	M	M	M
Life and related sciences	40,700	40,500	M	M	M	M
Physical and related sciences	45,800	46,900	M	M	M	M
Social and related sciences	49,000	50,000	41,200	59,800	[illegible]	M
Engineering	36,500	M	M	M	M	M
Private-for-profit:						
Total	71,900	72,900	62,400	65,300	[illegible]	73,100
Sciences	70,800	72,300	60,300	64,000	65,700	70,400
Computer and mathematical sciences	75,400	77,400	M	65,800	70,200	M
Life and related sciences	68,700	70,100	62,900	60,100	62,500	M
Physical and related sciences	72,000	72,700	59,900	65,200	65,900	M
Social and related sciences	70,400	70,900	55,100	70,200	63,000	M
Engineering	72,800	75,800	70,600	67,400	67,300	M
Private not-for-profit:						
Total	58,600	59,600	61,700	51,500	55,700	M
Sciences	56,700	57,600	58,600	51,600	51,300	M
Computer and mathematical sciences	75,900	76,900	M	M	M	M
Life and related sciences	56,700	58,200	M	M	41,300	M
Physical and related sciences	62,900	63,900	M	M	56,200	M
Social and related sciences	53,000	53,300	56,800	49,000	42,800	M
Engineering	75,400	78,900	M	M	68,000	M

See explanatory information and SOURCE at end of table.

Table 46. Median annual salaries of doctoral scientists and engineers, by sector of employment, field of doctorate, and race/ethnicity: 1993

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Sector/field of doctorate	Total	White	Black	Hispanic	Asian or Pacific Islander	Native American
Federal government:						
Total	$62,900	$63,900	$56,200	$60,100	$58,800	M
Sciences	62,200	62,600	55,100	56,400	57,500	M
Computer and mathematical sciences	65,500	66,300	M	M	M	M
Life and related sciences	58,700	60,100	52,400	50,200	52,500	M
Physical and related sciences	66,900	67,600	M	66,400	58,700	M
Social and related sciences	62,600	62,600	58,600	55,800	67,900	M
Engineering	70,600	71,300	M	M	63,100	M
State and local government:						
Total	48,600	49,000	48,400	42,600	45,800	M
Sciences	48,600	49,000	48,200	42,700	48,000	M
Computer and mathematical sciences	M	M	M	M	M	M
Life and related sciences	49,300	49,600	M	M	48,700	M
Physical and related sciences	47,400	49,100	M	M	M	M
Social and related sciences	48,500	48,800	48,800	M	48,200	M
Engineering	48,200	49,500	M	M	44,600	M
Other sector:						
Total	90,800	101,500	M	M	84,600	M
Sciences	90,800	101,400	M	M	84,800	M
Computer and mathematical sciences	M	M	M	M	M	M
Life and related sciences	M	M	M	M	M	M
Physical and related sciences	M	M	M	M	M	M
Social and related sciences	100,200	108,100	M	M	M	M
Engineering	M	M	M	M	M	M

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 47. Median annual salaries of doctoral scientists and engineers, by sector of employment, broad occupation, and race/ethnicity: 1993

Page 1 of 2

Sector/occupation	Total	White	Black	Hispanic	Asian or Pacific Islander	Native American
All sectors:						
Total	$60,000	$60,200	$51,000	$53,500	$57,800	$55,000
Scientists	52,700	53,400	48,000	50,100	50,600	45,600
Computer and mathematical scientists	57,400	58,100	51,500	50,600	55,900	M
Life and related scientists	50,800	51,800	47,600	45,600	48,100	45,400
Physical and related scientists	58,700	60,200	48,900	54,300	52,300	57,400
Social and related scientists	49,300	49,900	45,800	46,400	44,300	45,200
Engineers	64,700	65,600	60,200	59,600	62,000	M
Non-S&E occupations	72,000	72,500	60,000	65,400	71,400	62,100
Universities and 4-year colleges:						
Total	51,100	52,200	48,000	45,900	46,000	46,400
Scientists	48,600	49,700	44,500	43,100	[illegible]	44,700
Computer and mathematical scientists	50,600	51,400	51,100	48,200	[illegible]	M
Life and related scientists	48,600	49,700	44,200	38,300	40,500	44,400
Physical and related scientists	50,000	50,700	43,000	42,900	39,300	M
Social and related scientists	47,000	47,600	44,300	43,800	42,300	44,900
Engineers	60,100	60,800	50,400	50,900	53,800	M
Non-S&E occupations	62,200	63,300	55,700	51,800	53,100	55,700
Other educational institutions:						
Total	45,500	45,800	42,300	50,700	42,200	M
Scientists	45,200	45,400	42,100	M	42,100	M
Computer and mathematical scientists	45,100	46,300	M	M	M	M
Life and related scientists	40,400	40,400	M	M	M	M
Physical and related scientists	46,100	46,400	M	M	M	M
Social and related scientists	47,300	47,800	M	M	M	M
Engineers	M	M	M	M	M	M
Non-S&E occupations	48,100	48,500	42,500	46,900	40,900	M
Private-for-profit:						
Total	71,900	72,900	62,400	65,300	66,500	73,100
Scientists	65,700	66,600	58,000	60,600	62,100	M
Computer and mathematical scientists	70,000	70,700	M	65,500	66,600	M
Life and related scientists	62,300	63,000	67,100	57,600	60,000	M
Physical and related scientists	66,100	67,700	58,000	57,800	60,600	M
Social and related scientists	63,200	63,900	M	M	60,900	M
Engineers	68,100	70,300	63,400	62,100	65,400	M
Non-S&E occupations	85,600	86,600	74,200	85,000	80,400	62,900

See explanatory information and SOURCE at end of table.

Table 47. Median annual salaries of doctoral scientists and engineers, by sector of employment, broad occupation, and race ethnicity: 1993

Page 2 of 2

Sector/occupation	Total	White	Black	Hispanic	Asian or Pacific Islander	Native American
Private not-for-profit:						
Total	$58,600	$59,600	$61,700	$51,500	$55,700	M
Scientists	53,200	53,700	M	47,400	51,000	M
Computer and mathematical scientists	69,600	69,700	M	M	M	M
Life and related scientists	49,800	50,100	M	M	48,000	M
Physical and related scientists	60,200	62,200	M	M	50,900	M
Social and related scientists	50,200	50,500	M	M	51,000	M
Engineers	70,200	75,800	M	M	58,800	M
Non-S&E occupations	63,300	63,100	65,000	73,700	64,300	M
Federal government:						
Total	62,900	63,900	56,200	60,100	58,800	M
Scientists	58,400	59,000	51,300	53,700	55,800	M
Computer and mathematical scientists	60,800	62,000	M	M	60,600	M
Life and related scientists	52,900	54,300	50,300	43,800	49,300	M
Physical and related scientists	62,900	64,300	M	M	58,700	M
Social and related scientists	59,000	59,200	M	M	M	M
Engineers	62,300	62,400	M	M	60,400	M
Non-S&E occupations	73,700	74,000	66,200	75,400	67,100	M
State and local government:						
Total	48,600	49,000	48,400	42,600	45,800	M
Scientists	45,800	45,900	M	M	46,100	M
Computer and mathematical scientists	41,300	M	M	M	M	M
Life and related scientists	41,100	40,900	M	M	M	M
Physical and related scientists	42,900	43,200	M	M	M	M
Social and related scientists	48,100	48,300	M	M	M	M
Engineers	44,400	M	M	M	M	M
Non-S&E occupations	51,400	52,300	48,500	M	48,200	M
Other sector:						
Total	90,800	101,500	M	M	84,600	M
Scientists	90,200	98,500	M	M	M	M
Computer and mathematical scientists	M	M	M	M	M	M
Life and related scientists	M	M	M	M	M	M
Physical and related scientists	M	M	M	M	M	M
Social and related scientists	90,500	100,000	M	M	M	M
Engineers	M	M	M	M	M	M
Non-S&E occupations	M	M	M	M	M	M

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 48. Median annual salaries of doctoral scientists and engineers, by demographic characteristics, race/ethnicity, and sex: 1993

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Characteristics	Total			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	$60,000	$61,500	$48,400	$60,200	$62,400	$48,600	$51,000	$52,700	$47,600
Age:									
Under 30	40,900	44,500	33,900	39,300	42,600	33,900	48,600	M	M
30-34	45,700	48,300	40,200	45,600	48,100	40,600	44,600	49,000	39,000
35-39	51,600	53,200	45,800	51,900	54,100	45,500	45,900	42,300	50,100
40-44	59,300	60,800	50,200	58,600	60,700	50,200	50,700	54,600	46,600
45-49	63,900	66,500	52,100	63,900	66,500	52,300	57,700	60,600	50,400
50-54	67,500	70,200	50,900	68,100	70,500	50,800	55,900	59,900	52,300
55-59	68,400	70,300	55,400	69,400	70,600	55,400	58,600	58,700	45,800
60-64	67,200	70,100	51,100	67,700	70,300	51,100	48,900	46,200	50,900
65-75	68,800	70,300	56,700	70,200	72,000	56,400	60,800	M	M
Citizenship status:									
U.S. total	60,400	62,800	48,700	60,300	62,600	48,600	52,400	56,600	48,100
U.S. native	60,100	62,200	48,400	60,200	62,400	48,500	52,500	58,100	48,300
U.S. naturalized	65,600	67,700	52,300	65,300	67,600	50,700	51,700	53,300	45,700
Non-U.S. total	50,200	50,800	43,000	52,900	54,500	46,400	47,500	47,800	M
Non-U.S., permanent resident	52,500	54,100	46,000	55,300	57,400	47,600	47,800	47,900	M
Non-U.S., temporary resident	40,200	40,700	35,500	42,600	43,600	38,500	46,600	M	M
Geographic division:									
New England	59,300	62,500	46,000	60,100	62,600	47,100	51,900	54,800	48,000
Middle Atlantic	62,100	65,100	51,900	62,200	65,300	51,600	58,100	60,100	50,800
East North Central	57,300	60,300	47,400	58,300	60,700	47,400	48,600	48,700	47,800
West North Central	51,700	53,800	42,900	52,100	54,500	43,600	46,000	47,000	M
South Atlantic	60,400	63,200	48,100	61,500	65,000	48,300	50,900	52,300	49,100
East South Central	52,700	54,000	46,000	54,200	55,600	47,600	45,700	49,500	42,700
West South Central	57,100	60,400	44,900	57,800	60,800	45,300	46,700	48,600	43,600
Mountain	56,300	60,100	43,500	57,600	60,500	43,800	49,400	49,500	M
Pacific	62,300	65,300	50,700	62,400	65,400	50,800	53,300	60,000	48,900
Other U.S.	42,700	44,500	36,900	50,100	50,800	M	M	M	M
Place of birth:									
U.S.	60,100	62,300	48,500	60,200	62,400	48,600	52,400	58,000	48,300
Canada	60,800	64,800	46,900	60,900	64,900	48,200	M	M	M
Latin & South America	54,300	56,200	48,600	56,800	57,400	50,500	50,200	51,900	46,600
North, Central, West Europe	60,500	63,300	46,800	60,700	64,600	47,300	M	M	M
Eastern Europe	60,500	61,700	49,900	60,400	61,400	49,900	M	M	M
Eastern Asia	56,900	58,400	49,200	50,100	52,400	M	M	M	M
Western Asia	60,100	60,900	46,500	58,500	60,100	48,000	M	M	M
Australasia	52,800	60,100	47,200	58,700	59,900	52,400	M	M	M
Africa	54,700	55,300	47,700	60,400	60,600	51,500	47,800	48,400	M

See explanatory information and SOURCE at end of table.

Table 48. Median annual salaries of doctoral scientists and engineers, by demographic characteristics, race ethnicity, and sex: 1993

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Characteristics	Hispanic			Asian			Native American		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	$53,500	$56,500	$43,700	$57,800	$60,100	$48,000	$55,000	$55,700	$45,500
Age:									
Under 30	35,900	35,700	M	46,200	49,000	31,600	M	M	M
30-34	42,900	46,900	36,000	46,400	48,900	39,000	M	M	M
35-39	46,000	47,100	44,900	52,300	52,600	50,300	40,900	M	M
40-44	52,300	55,800	44,300	63,300	65,300	55,900	45,800	45,700	M
45-49	60,900	65,600	43,200	66,900	69,700	53,800	60,300	60,900	M
50-54	66,000	68,900	46,800	67,900	68,700	58,000	58,800	58,500	M
55-59	62,000	60,800	M	68,400	70,600	56,200	M	M	M
60-64	84,100	M	M	66,100	68,300	47,300	M	M	M
65-75	M	M	M	63,100	63,200	M	M	M	M
Citizenship status:									
U.S. total	55,000	59,900	43,500	65,600	67,700	53,300	55,200	55,900	45,800
U.S. native	52,000	56,500	40,600	57,200	60,500	48,500	55,100	55,900	45,400
U.S. naturalized	60,600	60,900	51,700	67,000	68,900	55,300	M	M	M
Non-U.S. total	50,100	51,400	45,100	48,900	50,300	41,500	M	M	M
Non-U.S., permanent resident	51,500	52,500	45,800	52,000	52,900	44,600	M	M	M
Non-U.S., temporary resident	40,200	42,300	M	39,400	40,200	35,200	M	M	M
Geographic division:									
New England	63,300	64,600	M	53,400	58,200	40,800	M	M	M
Middle Atlantic	55,800	57,000	52,100	63,100	65,100	54,400	57,200	M	M
East North Central	50,600	51,400	40,000	55,200	56,000	47,900	46,300	M	M
West North Central	51,300	53,800	M	48,300	50,200	42,300	M	M	M
South Atlantic	56,200	60,200	49,900	54,700	56,300	44,000	63,400	M	M
East South Central	51,700	51,900	M	46,100	46,700	43,000	M	M	M
West South Central	50,500	51,900	44,500	55,900	58,900	43,000	50,500	50,200	M
Mountain	45,500	49,000	36,700	50,500	50,700	48,400	45,500	M	M
Pacific	58,100	60,800	40,100	63,100	65,200	51,700	57,700	60,000	M
Other U.S.	37,200	38,500	35,000	M	M	M	M	M	M
Place of birth:									
U.S.	52,300	56,500	40,800	57,800	61,000	48,900	55,100	55,900	45,400
Canada	M	M	M	M	M	M	M	M	M
Latin & South America	55,100	57,300	49,300	M	M	M	M	M	M
North, Central, West Europe	49,000	50,400	M	M	M	M	M	M	M
Eastern Europe	M	M	M	M	M	M	M	M	M
Eastern Asia	M	M	M	57,100	58,600	43,600	M	M	M
Western Asia	M	M	M	60,500	62,300	45,100	M	M	M
Australasia	M	M	M	48,600	58,700	47,000	M	M	M
Africa	M	M	M	M	M	M	M	M	M

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 49. Median annual salaries of doctoral scientists and engineers, by demographic characteristics and citizenship status: 1993

Page 1 of 2

Characteristics	Total	U.S. Citizen			Non-U.S. Citizen		
		Total	Native	Naturalized	Total	Permanent resident	Temporary resident
Total	$60,000	$60,400	$60,100	$65,600	$50,200	$52,500	$40,200
Sex:							
Men	61,500	62,800	62,200	67,700	50,800	54,100	40,700
Women	48,400	48,700	48,400	52,300	43,000	46,000	35,500
Race/Ethnicity:							
White	60,200	60,300	60,200	65,300	52,900	55,300	42,600
Black	51,000	52,400	52,500	51,700	47,500	47,800	46,600
Hispanic	53,500	55,000	52,000	60,600	50,100	51,500	40,200
Asian/Pacific Islander	57,800	65,600	57,200	67,000	48,900	52,000	39,400
Native American	55,000	55,200	55,100	M	M	M	M
Age:							
Under 30	40,900	39,200	39,100	35,700	43,300	47,900	40,400
30-34	45,700	45,500	45,200	50,200	46,500	50,600	38,800
35-39	51,600	52,100	51,500	57,200	50,000	51,400	40,000
40-44	59,300	60,100	58,200	66,000	53,300	54,900	43,900
45-49	63,900	64,400	63,300	70,000	53,600	57,400	44,700
50-54	67,500	67,900	67,600	68,600	60,000	60,600	M
55-59	68,400	68,500	68,000	70,400	61,500	60,500	M
60-64	67,200	67,400	67,000	70,500	54,100	57,300	M
65-75	68,800	69,300	69,300	70,000	M	M	M
Geographic division:							
New England	59,300	60,400	59,700	70,100	47,900	50,500	36,800
Middle Atlantic	62,100	63,000	62,000	68,700	55,500	57,800	48,400
East North Central	57,300	59,000	58,000	61,400	49,100	51,300	40,300
West North Central	51,700	52,300	51,600	60,000	42,300	47,500	34,500
South Atlantic	60,400	61,400	61,100	62,500	45,900	48,200	38,400
East South Central	52,700	53,900	53,900	54,300	42,900	43,300	40,900
West South Central	57,100	58,500	57,300	67,900	48,200	50,500	39,000
Mountain	56,300	57,400	57,700	55,400	43,600	45,500	34,200
Pacific	62,300	63,200	62,100	70,300	55,000	60,000	40,900
Other U.S.	42,700	43,000	42,900	M	M	M	M
Field of doctorate:							
Sciences	56,500	57,800	57,200	60,800	45,900	49,500	37,000
Computer and mathematical sciences	57,800	60,200	60,100	60,500	49,300	51,400	40,100
Computer and information sciences	60,800	62,700	60,700	69,700	58,300	57,600	58,500
Mathematical sciences	56,500	59,100	59,200	59,300	40,900	43,500	37,400
Life and related sciences	55,000	55,600	55,200	60,300	41,000	47,500	31,300
Agricultural and food sciences	53,100	54,200	54,100	55,800	40,500	47,700	30,700
Biological and health sciences	55,100	55,700	55,300	60,800	41,400	47,000	31,000
Environmental sciences	57,500	57,800	57,800	M	M	M	M

See explanatory information and SOURCE at end of table.

Table 49. Median annual salaries of doctoral scientists and engineers, by demographic characteristics and citizenship status: 1993

Page 2 of 2

Characteristics	Total	U.S. Citizen			Non-U.S. Citizen		
		Total	Native	Naturalized	Total	Permanent resident	Temporary resident
Physical and related sciences	$64,100	$65,700	$65,500	$67,400	$46,900	$51,300	$35,600
Chemistry, except biochemistry	64,100	65,800	65,500	67,900	49,800	51,600	37,300
Geology and oceanography	60,100	60,500	60,300	65,600	45,300	46,800	36,700
Physics and astronomy	66,400	68,200	68,400	67,300	45,200	52,100	35,100
Other physical sciences (incl. earth)	48,500	48,800	48,800	M	M	M	M
Social and related sciences	52,100	52,400	52,400	51,600	46,400	46,500	43,500
Economics	61,400	62,300	63,200	52,600	50,800	50,400	60,100
Polical and related sciences	52,200	52,900	52,800	58,000	38,600	38,700	M
Psychology	51,700	51,800	52,000	50,500	46,900	49,500	M
Sociology and anthropology	48,100	48,300	48,000	53,400	40,700	40,500	M
Other social sciences	50,200	50,400	50,300	50,800	44,500	46,900	M
Engineering	69,000	72,000	72,100	71,300	55,700	58,500	47,600
Aerospace/aeronautical	68,800	70,400	70,600	68,300	55,400	56,800	M
Chemical	72,000	75,000	72,900	80,000	59,600	60,800	52,800
Civil	63,700	67,000	65,500	69,300	51,100	55,500	40,700
Electrical/computer	72,500	75,600	75,700	75,000	60,800	62,600	55,500
Industrial	60,900	62,900	62,600	65,200	50,900	51,000	M
Mechanical	66,400	70,600	70,900	70,500	51,100	55,200	47,200
Other engineering	66,600	70,300	70,300	70,400	52,300	55,200	44,400
Place of birth:							
U.S.	60,100	60,100	60,100	55,400	M	M	M
Canada	60,800	61,800	45,800	65,000	60,400	64,400	37,500
Latin & South America	54,300	59,700	56,600	60,100	49,000	51,500	40,300
North, Central, West Europe	60,500	65,000	45,600	67,100	52,300	55,200	40,000
Eastern Europe	60,500	64,500	M	64,300	54,600	57,100	46,300
Eastern Asia	56,900	65,700	53,300	65,900	45,800	50,700	37,800
Western Asia	60,100	67,300	53,200	67,600	52,100	53,600	47,300
Australasia	52,800	60,200	M	60,400	46,800	50,600	M
Africa	54,700	62,200	M	63,700	48,500	49,800	46,700

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 30. Median annual salaries of doctoral scientists and engineers, by demographic characteristics and sector of employment: 1993

Page 1 of 2

Characteristics	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Private not-for-profit	Federal government	State & local government	Other sector
Total	$60,000	$51,100	$45,500	$71,900	$58,600	$62,900	$48,600	$90,800
Sex:								
Men	61,500	54,000	47,600	72,800	61,900	65,200	48,800	100,500
Women	48,400	43,300	42,000	60,700	52,000	54,700	48,000	75,300
Race/Ethnicity:								
White	60,200	52,200	45,800	72,900	59,600	63,900	49,000	101,500
Black	51,000	48,000	42,300	62,400	61,700	56,200	48,400	M
Hispanic	53,500	45,900	50,700	65,300	51,500	60,100	42,600	M
Asian/Pacific Islander	57,800	46,000	42,200	66,500	55,700	58,800	45,800	84,600
Native American	55,000	46,400	M	73,100	M	M	M	M
Age:								
Under 30	40,900	32,400	M	55,600	37,100	37,900	M	M
30-34	45,700	36,900	35,700	58,100	43,300	45,300	41,100	M
35-39	51,600	43,500	40,100	65,200	51,900	51,300	43,900	80,900
40-44	59,300	50,200	40,000	73,500	58,900	58,700	48,600	M
45-49	63,900	55,300	46,900	80,200	69,600	66,200	49,800	M
50-54	67,500	60,400	50,500	84,500	75,500	73,000	49,500	M
55-59	68,400	61,200	49,600	82,700	62,600	73,500	55,800	M
60-64	67,200	63,900	53,100	80,900	59,900	77,300	51,800	M
65-75	68,800	67,600	45,900	78,000	71,800	73,600	46,500	M
Citizenship status:								
U.S. total	60,400	52,400	45,900	72,900	59,800	63,200	48,800	105,100
U.S. native	60,100	52,000	45,800	73,000	59,500	63,300	48,900	108,400
U.S. naturalized	65,600	57,800	46,600	72,800	60,300	62,900	48,300	M
Non-U.S. total	50,200	42,200	36,500	60,100	51,100	41,600	45,400	84,500
Non-U.S., permanent resident	52,500	45,400	35,900	61,300	55,100	43,300	48,000	M
Non-U.S., temporary resident	40,200	33,000	M	51,900	39,600	M	M	90,700
Geographic division:								
New England	59,300	52,000	44,900	74,500	57,200	62,100	51,600	M
Middle Atlantic	62,100	53,700	52,200	73,000	58,400	60,400	50,700	M
East North Central	57,300	51,500	45,900	68,000	55,600	58,800	43,600	M
West North Central	51,700	48,200	40,900	63,900	51,300	50,100	44,400	M
South Atlantic	60,400	50,400	41,400	70,600	67,200	66,600	45,700	98,900
East South Central	52,700	48,700	M	64,800	48,600	59,900	M	M
West South Central	57,100	50,000	40,100	72,800	50,700	59,900	44,000	M
Mountain	56,300	50,400	40,100	71,600	55,000	60,700	42,200	M
Pacific	62,300	55,900	50,200	74,600	62,700	61,400	50,900	M
Other U.S.	42,700	40,200	M	72,000	M	M	M	M

See explanatory information and SOURCE at end of table.

Table 50. Median annual salaries of doctoral scientists and engineers, by demographic characteristics and sector of employment: 1993

Page 2 of 2

Characteristics	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Private not-for-profit	Federal government	State & local government	Other sector
Place of birth:								
U.S.	$60,100	$52,100	$45,900	$73,100	$59,600	$63,300	$49,000	$110,200
Canada	60,800	50,300	M	76,100	M	M	M	M
Latin & South America	54,300	48,300	M	60,600	43,900	58,500	M	M
North, Central, West Europe	60,500	54,000	M	71,300	61,300	63,700	49,600	M
Eastern Europe	60,500	55,000	M	71,500	52,500	70,400	M	M
Eastern Asia	56,900	45,000	40,600	65,200	52,700	57,300	46,300	M
Western Asia	60,100	48,600	42,400	70,500	64,900	65,500	44,100	M
Australasia	52,800	46,700	M	70,600	M	M	M	M
Africa	54,700	48,500	M	67,000	M	M	M	M

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 51. Median annual salaries of doctoral scientists and engineers, by demographic characteristics and primary work activity: 1993

Page 1 of 2

Characteristics	Total	Research & development					Teaching	Management, sales, and administration	Computer applications	Prof. services/ other
		Total	Applied research	Basic research	Development	Design				
Total	$60,000	$60,600	$62,500	$51,800	$68,900	$69,300	$48,200	$76,000	$62,600	$55,600
Sex:										
Men	61,500	62,800	64,700	55,000	70,200	69,800	50,200	80,200	63,200	60,300
Women	48,400	49,700	53,000	41,900	57,000	62,200	41,600	60,300	53,300	48,700
Race/Ethnicity:										
White	60,200	61,500	63,600	53,100	70,200	70,400	48,600	76,500	63,400	55,700
Black	51,000	51,100	52,000	47,900	58,500	60,500	44,400	67,300	52,100	53,600
Hispanic	53,500	55,500	57,200	45,200	59,700	61,000	41,800	75,300	62,800	53,000
Asian/Pacific Islander	57,800	58,000	59,700	44,800	66,200	67,000	46,900	77,300	60,600	60,400
Native American	55,000	59,700	60,000	M	M	M	45,300	62,400	M	43,600
Age:										
Under 30	40,900	43,300	50,500	29,100	54,300	56,400	35,700	50,300	48,000	35,500
30-34	45,700	48,000	52,100	35,800	57,700	58,300	37,600	56,000	56,100	42,200
35-39	51,600	54,300	56,700	45,900	64,800	63,600	40,500	62,200	61,600	50,300
40-44	59,300	62,200	63,900	54,700	70,700	70,700	42,900	73,200	63,400	55,700
45-49	63,900	68,800	68,800	62,500	77,300	70,700	48,300	78,700	66,600	60,600
50-54	67,500	72,800	72,700	71,000	78,200	76,600	52,100	84,100	66,400	64,000
55-59	68,400	73,700	75,700	70,700	75,800	72,400	55,000	82,700	62,600	65,300
60-64	67,200	75,300	77,200	75,600	72,200	M	59,500	84,200	M	60,400
65-75	68,800	76,300	70,900	79,200	65,800	M	57,500	85,500	M	66,500
Citizenship status:										
U.S. total	60,400	62,300	64,000	53,700	70,500	70,100	48,600	76,300	64,500	55,800
U.S. native	60,100	61,200	63,400	52,700	70,200	70,100	48,300	75,900	63,600	55,400
U.S. naturalized	65,600	67,000	67,700	60,000	72,500	70,100	51,700	80,400	66,000	65,400
Non-U.S. total	50,200	50,900	52,500	40,900	60,200	60,000	42,900	70,300	54,700	52,100
Non-U.S., permanent resident	52,500	54,600	55,100	46,900	60,700	63,100	44,100	70,500	57,700	52,200
Non-U.S., temporary resident	40,200	39,200	47,000	31,600	52,600	47,300	37,500	60,700	44,900	47,700
Geographic division:										
New England	59,300	60,300	63,200	50,700	73,000	70,000	50,800	75,800	68,300	53,400
Middle Atlantic	62,100	65,000	65,700	57,700	70,300	70,600	50,800	80,000	65,900	59,000
East North Central	57,300	60,100	60,900	52,100	66,100	61,300	48,200	74,700	58,500	53,400
West North Central	51,700	55,600	57,000	48,800	60,800	60,500	45,300	70,100	52,400	50,800
South Atlantic	60,400	60,300	62,300	51,100	66,200	73,400	46,500	77,200	60,700	58,300
East South Central	52,700	55,100	57,700	48,500	55,800	63,600	43,700	70,500	59,000	54,200
West South Central	57,100	60,800	62,600	52,700	70,000	68,400	45,400	74,800	62,100	51,400
Mountain	56,300	59,000	60,500	46,900	66,800	63,900	46,100	74,100	60,100	52,600
Pacific	62,300	63,400	64,900	51,800	72,300	72,800	54,000	82,900	62,800	56,500
Other U.S.	42,700	43,900	42,400	42,500	M	M	36,900	49,200	M	M

See explanatory information and SOURCE at end of table.

Table 51. Median annual salaries of doctoral scientists and engineers, by demographic characteristics and primary work activity: 1993

Page 2 of 2

Characteristics	Total	Research & development					Teaching	Management, sales, and administration	Computer applications	Prof. services/ other
		Total	Applied research	Basic research	Development	Design				
Place of birth:										
U.S.	$60,100	$61,400	$63,400	$52,800	$70,200	$70,100	$48,300	$75,900	$63,600	$55,400
Canada	60,800	60,400	64,700	44,600	M	M	50,200	75,500	M	60,900
Latin & South America	54,300	55,800	56,100	48,700	58,700	M	42,700	75,700	56,400	62,600
North, Central, West Europe	60,500	60,600	62,900	55,400	65,200	M	48,600	81,600	61,400	53,600
Eastern Europe	60.500	60,300	60,700	55,000	74,100	M	57,200	78,400	65,900	57,400
Eastern Asia	56,900	55,800	57,500	41,200	65,100	66,800	47,800	76,100	60,300	57,800
Western Asia	60,100	61,700	63,500	50,400	68,400	70,400	47,200	78,700	65,000	67,900
Australasia	52,800	56,000	59,400	M	M	M	43,700	70,700	M	M
Africa	54,700	59,500	58,600	50,200	M	M	45,900	70,400	57,000	55,500

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 52. Median annual salaries of doctoral scientists and engineers, by demographic characteristics and broad field of doctorate: 1993

Page 1 of 2

Characteristics	Total	Sciences	Computer and mathematical sciences	Life and related sciences	Physical and related sciences	Social and related sciences	Engineering
Total	$60,000	$56,500	$57,800	$55,000	$64,100	$52,100	$69,000
Sex:							
Men	61,500	60,200	58,800	58,200	65,500	55,300	70,000
Women	48,400	48,000	51,700	47,400	52,500	46,600	58,500
Race/Ethnicity:							
White	60,200	57,600	59,600	55,500	65,500	52,500	70,800
Black	51,000	50,400	53,200	50,100	54,600	49,500	60,800
Hispanic	53,500	51,800	55,100	50,500	57,800	48,500	60,800
Asian/Pacific Islander	57,800	52,400	54,300	50,500	57,300	46,600	64,700
Native American	55,000	52,800	M	55,000	60,000	46,400	60,400
Age:							
Under 30	40,900	35,800	41,100	25,000	37,000	37,500	54,800
30-34	45,700	41,800	50,200	35,100	48,300	41,400	55,800
35-39	51,600	49,400	50,200	47,700	56,600	45,500	60,700
40-44	59,300	55,700	60,700	55,400	65,500	50,400	70,700
45-49	63,900	61,500	61,400	60,900	71,400	55,200	75,700
50-54	67,500	64,300	62,800	63,200	72,500	58,400	80,600
55-59	68,400	65,100	60,300	65,400	72,800	58,800	80,600
60-64	67,200	65,400	64,200	67,600	72,100	60,200	78,000
65-75	68,800	68,500	70,500	70,100	72,600	63,300	70,200
Year of doctorate:							
1991-92 graduates	40,600	37,200	46,000	32,300	38,000	39,300	52,300
1985-90 graduates	48,800	45,800	50,400	44,000	52,000	43,800	59,900
1980-84 graduates	59,000	55,700	55,800	55,400	64,400	51,100	70,500
1970-79 graduates	66,100	63,900	62,900	64,000	71,700	59,400	78,400
1960-69 graduates	72,300	70,200	62,900	70,600	73,300	62,900	85,900
Pre-1960 graduates	78,500	76,400	75,800	75,700	78,700	72,700	85,400
Citizenship status:							
U.S. total	60,400	57,800	60,200	55,600	65,700	52,400	72,000
U.S. native	60,100	57,200	60,100	55,200	65,500	52,400	72,100
U.S. naturalized	65,600	60,800	60,500	60,300	67,400	51,600	71,300
Non-U.S. total	50,200	45,900	49,300	41,000	46,900	46,400	55,700
Non-U.S., permanent resident	52,500	49,500	51,400	47,500	51,300	46,500	58,500
Non-U.S., temporary resident	40,200	37,000	40,100	31,300	35,600	43,500	47,600

See explanatory information and SOURCE at end of table.

Table 52. Median annual salaries of doctoral scientists and engineers, by demographic characteristics and broad field of doctorate: 1993

Page 2 of 2

Characteristics	Total	Sciences	Computer and mathematical sciences	Life and related sciences	Physical and related sciences	Social and related sciences	Engineering
Place of birth:							
U.S.	$60,100	$57,300	$60,200	$55,300	$65,600	$52,400	$72,100
Canada	60,800	60,400	M	53,300	65,900	58,700	71,700
Latin & South America	54,300	52,000	48,300	50,700	54,600	51,200	60,900
North, Central, West Europe	60,500	60,000	55,200	57,900	67,000	51,200	67,700
Eastern Europe	60,500	57,200	50,900	60,300	60,600	52,000	67,500
Eastern Asia	56,900	52,200	54,800	50,000	55,600	45,900	62,400
Western Asia	60,100	52,600	51,300	52,700	60,300	47,200	65,900
Australasia	52,800	48,800	M	53,000	M	46,000	65,900
Africa	54,700	50,300	63,600	50,500	54,000	49,900	64,100

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 53. Median annual salaries of doctoral scientists and engineers, by demographic characteristics and broad occupation: 1993

Page 1 of 2

Characteristics	Total	Scientists	Computer and mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Engineers	Non-S&E occupations
Total	$60,000	$52,700	$57,400	$50,800	$58,700	$49,300	$64,700	$72,000
Sex:								
Men	61,500	55,400	58,300	53,400	60,100	50,900	65,100	76,300
Women	48,400	45,200	49,800	43,300	50,700	44,000	58,000	53,600
Race/Ethnicity:								
White	60,200	53,400	58,100	51,800	60,200	49,900	65,600	72,500
Black	51,000	48,000	51,500	47,600	48,900	45,800	60,200	60,000
Hispanic	53,500	50,100	50,600	45,600	54,300	46,400	59,600	65,400
Asian/Pacific Islander	57,800	50,600	55,900	48,100	52,300	44,300	62,000	71,400
Native American	55,000	45,600	M	45,400	57,400	45,200	M	62,100
Age:								
Under 30	40,900	35,800	44,500	M	37,600	36,700	54,500	42,400
30-34	45,700	41,300	50,700	33,800	47,300	40,100	55,100	51,200
35-39	51,600	48,000	52,500	45,700	54,200	44,000	60,200	59,500
40-44	59,300	52,600	60,800	52,300	60,500	47,400	65,800	69,200
45-49	63,900	57,000	60,500	57,600	63,700	50,600	70,600	74,800
50-54	67,500	60,400	60,500	60,500	67,400	54,400	72,300	80,300
55-59	68,400	60,500	60,500	60,500	66,700	55,600	75,200	80,300
60-64	67,200	62,400	60,600	65,600	67,100	58,700	72,400	77,700
65-75	68,800	65,300	63,100	72,300	68,400	60,300	78,300	78,600
Year of doctorate:								
1991-92 graduates	40,600	36,600	47,200	27,800	38,000	38,700	52,000	45,200
1985-90 graduates	48,800	45,200	51,000	42,500	50,700	42,500	58,000	52,000
1980-84 graduates	59,000	53,000	60,500	52,600	60,600	47,800	66,800	67,000
1970-79 graduates	66,100	60,000	60,800	60,100	65,100	53,400	72,300	78,900
1960-69 graduates	72,300	65,000	62,500	65,600	69,100	60,400	75,700	87,500
Pre-1960 graduates	78,500	72,600	70,100	75,400	72,500	70,100	80,200	91,900
Citizenship status:								
U.S. total	60,400	53,700	58,500	52,000	60,300	49,600	66,600	72,500
U.S. native	60,100	52,900	57,800	51,500	60,200	49,600	65,800	72,000
U.S. naturalized	65,600	59,200	60,700	56,400	62,800	50,000	69,000	78,400
Non-U.S. total	50,200	45,000	50,900	39,100	44,800	45,100	54,500	59,500
Non-U.S., permanent resident	52,500	48,200	54,200	44,700	50,500	44,400	56,700	60,600
Non-U.S., temporary resident	40,200	36,600	40,300	M	35,700	46,200	47,400	49,700

See explanatory information and SOURCE at end of table.

Table 53. Median annual salaries of doctoral scientists and engineers, by demographic characteristics and broad occupation: 1993

Characteristics	Total	Scientists	Computer and mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Engineers	Non-S&E occupations
Place of birth:								
U.S.	$60,100	$53,000	$57,900	$51,700	$60,200	$49,600	$65,300	$72,000
Canada	60,800	53,900	M	45,900	60,500	52,600	66,800	78,300
Latin & South America	54,300	50,700	48,600	44,900	54,300	51,200	59,100	70,800
North, Central, West Europe	60,500	54,100	58,400	50,200	60,600	46,900	62,500	75,200
Eastern Europe	60,500	57,200	54,600	53,300	60,200	53,200	60,400	72,800
Eastern Asia	56,900	50,500	57,500	43,900	51,700	43,900	60,700	70,100
Western Asia	60,100	50,400	52,600	50,300	52,600	45,000	62,700	72,800
Australasia	52,800	46,900	M	50,500	M	43,700	60,700	59,100
Africa	54,700	49,800	55,600	46,300	49,000	49,500	64,000	60,400

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 54. Median annual salaries of doctoral scientists and engineers, by employment-related characteristics, race/ethnicity, and sex: 1993

Page 1 of 2

Characteristics	Total			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	$60,000	$61,500	$48,400	$60,200	$62,400	$48,600	$51,000	$52,700	$47,600
Year of doctorate:									
1991-92 graduates	40,600	41,900	37,600	40,500	42,100	37,700	44,000	45,500	41,300
1985-90 graduates	48,800	50,500	43,900	48,400	50,200	43,700	45,200	47,700	44,500
1980-84 graduates	59,000	60,700	51,900	58,200	60,500	50,900	54,000	53,600	54,600
1970-79 graduates	66,100	68,200	56,900	66,000	68,200	56,900	60,300	60,700	52,800
1960-69 graduates	72,300	73,100	57,700	72,500	73,500	56,700	52,600	52,200	M
Pre-1960 graduates	78,500	78,600	72,100	76,300	78,400	76,000	M	M	M
Sector of employment:									
Universities and 4-year colleges	51,100	54,000	43,300	52,200	55,200	43,800	48,000	50,000	44,400
Other educational institutions	45,500	47,600	42,000	45,800	48,700	41,600	42,300	42,400	41,800
Private-for-profit	71,900	72,800	60,700	72,900	75,100	61,200	62,400	63,900	55,500
Private not-for-profit	58,600	61,900	52,000	59,600	62,300	52,200	61,700	64,300	M
Federal government	62,900	65,200	54,700	63,900	65,800	55,000	56,200	56,300	55,700
State and local government	48,600	48,800	48,000	49,000	49,100	48,700	48,400	51,200	45,800
Other sector	90,800	100,500	75,300	101,500	108,100	M	M	M	M
Primary work activity:									
R&D	60,600	62,800	49,700	61,500	64,000	50,200	51,100	54,500	44,700
Applied research	62,500	64,700	53,000	63,600	65,500	54,100	52,000	54,000	48,400
Basic research	51,800	55,000	41,900	53,100	56,100	42,700	47,900	50,600	42,900
Development	68,900	70,200	57,000	70,200	71,100	57,800	58,500	60,800	M
Design	69,300	69,800	62,200	70,400	70,700	64,000	60,500	M	M
Teaching	48,200	50,200	41,600	48,600	50,500	41,800	44,400	45,100	42,900
Management, sales, and administration	76,000	80,200	60,300	76,500	80,300	60,200	67,300	72,000	60,100
Computer applications	62,600	63,200	53,300	63,400	64,400	52,700	52,100	61,500	M
Professional services/other	55,600	60,300	48,700	55,700	60,300	48,300	53,600	56,400	53,100

See explanatory information and SOURCE at end of table.

Table 54. Median annual salaries of doctoral scientists and engineers, by employment-related characteristics, race/ethnicity, and sex: 1993

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Characteristics	Hispanic			Asian			Native American		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	$53,500	$56,500	$43,700	$57,800	$60,100	$48,000	$55,000	$55,700	$45,500
Year of doctorate:									
1991-92 graduates	38,000	40,200	36,000	40,600	41,600	36,200	41,200	M	M
1985-90 graduates	48,300	50,100	44,000	51,800	52,700	45,400	40,300	41,300	M
1980-84 graduates	55,500	57,600	45,900	64,800	65,600	60,000	58,200	58,500	M
1970-79 graduates	63,300	64,800	49,100	70,300	71,400	60,000	60,200	60,100	M
1960-69 graduates	73,300	73,600	M	71,800	72,500	60,200	M	M	M
Pre-1960 graduates	M	M	M	81,000	81,100	M	M	M	M
Sector of employment:									
Universities and 4-year colleges	45,900	48,900	38,600	46,000	48,600	39,800	46,400	46,700	43,300
Other educational institutions	50,700	50,400	54,700	42,200	40,600	45,500	M	M	M
Private-for-profit	65,300	67,300	58,900	66,500	67,600	60,000	73,100	75,000	M
Private not-for-profit	51,500	57,800	M	55,700	56,900	43,900	M	M	M
Federal government	60,100	60,600	52,900	58,800	60,200	52,400	M	M	M
State and local government	42,600	M	M	45,800	45,100	48,000	M	M	M
Other sector	M	M	M	84,600	M	M	M	M	M
Primary work activity:									
R&D	55,500	57,400	48,800	58,000	60,300	47,400	59,700	61,200	M
Applied research	57,200	58,200	52,400	59,700	60,600	51,400	60,000	60,700	M
Basic research	45,200	46,400	37,400	44,800	48,300	37,700	M	M	M
Development	59,700	60,100	M	66,200	66,600	57,100	M	M	M
Design	61,000	60,900	M	67,000	67,500	56,900	M	M	M
Teaching	41,800	45,100	37,800	46,900	48,700	40,800	45,300	46,100	M
Management, sales, and administration	75,300	79,200	50,600	77,300	80,200	62,700	62,400	62,100	M
Computer applications	62,800	65,200	M	60,600	60,700	59,400	M	M	M
Professional services/other	53,000	53,900	49,100	60,400	63,900	50,400	43,600	M	M

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 55. Median annual salaries of doctoral scientists and engineers, by employment-related characteristics and citizenship status: 1993

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Characteristics	Total	U.S. Citizen			Non-U.S. Citizen		
		Total	Native	Naturalized	Total	Permanent resident	Temporary resident
Total	$60,000	$60,400	$60,100	$65,600	$50,200	$52,500	$40,200
Year of doctorate:							
1991-92 graduates	40,600	40,700	40,400	46,300	40,400	43,000	38,500
1985-90 graduates	48,800	48,700	48,300	53,500	50,200	50,700	40,500
1980-84 graduates	59,000	58,900	57,400	65,500	60,200	60,500	M
1970-79 graduates	66,100	66,000	65,700	69,800	71,100	70,300	M
1960-69 graduates	72,300	72,400	72,400	72,300	61,900	68,000	M
Pre-1960 graduates	78,500	78,500	77,600	84,200	M	M	M
Sector of employment:							
Universities and 4-year colleges	51,100	52,400	52,000	57,800	42,200	45,400	33,000
Other educational institutions	45,500	45,900	45,800	46,600	36,500	35,900	M
Private-for-profit	71,900	72,900	73,000	72,800	60,100	61,300	51,900
Private not-for-profit	58,600	59,800	59,500	60,300	51,100	55,100	39,600
Federal government	62,900	63,200	63,300	62,900	41,600	43,300	M
State and local government	48,600	48,800	48,900	48,300	45,400	48,000	M
Other sector	90,800	105,100	108,400	M	84,500	M	90,700
Primary work activity:							
R&D	60,600	62,300	61,200	67,000	50,900	54,600	39,200
Applied research	62,500	64,000	63,400	67,700	52,500	55,100	47,000
Basic research	51,800	53,700	52,700	60,000	40,900	46,900	31,600
Development	68,900	70,500	70,200	72,500	60,200	60,700	52,600
Design	69,300	70,100	70,100	70,100	60,000	63,100	47,300
Teaching	48,200	48,600	48,300	51,700	42,900	44,100	37,500
Management, sales, and administration	76,000	76,300	75,900	80,400	70,300	70,500	60,700
Computer applications	62,600	64,500	63,600	66,000	54,700	57,700	44,900
Professional services/other	55,600	55,800	55,400	65,400	52,100	52,200	47,700

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 56. Median annual salaries of doctoral scientists and engineers, by employment-related characteristics and sector of employment: 1993

Page 1 of 1

Characteristics	Total	Universities and 4-year colleges	Other educational institutions	Private-for-profit	Private not-for-profit	Federal government	State & local government	Other sector
Total	$60,000	$51,100	$45,500	$71,900	$58,600	$62,900	$48,600	$90,800
Year of doctorate:								
1991-92 graduates	40,600	33,700	42,400	54,300	40,200	41,500	40,400	M
1985-90 graduates	48,800	41,400	40,200	60,800	48,500	50,900	44,100	74,800
1980-84 graduates	59,000	49,900	44,900	72,000	60,200	59,800	49,400	M
1970-79 graduates	66,100	58,800	49,400	80,600	72,400	69,500	50,400	M
1960-69 graduates	72,300	65,600	51,900	89,900	73,000	76,100	54,000	M
Pre-1960 graduates	78,500	75,800	M	85,500	80,400	83,300	M	M
Primary work activity:								
R&D	60,600	51,700	52,300	68,800	60,100	60,200	47,900	80,800
Applied research	62,500	54,900	M	68,700	62,200	60,600	48,200	84,300
Basic research	51,800	50,200	M	62,000	53,300	56,800	44,900	M
Development	68,900	55,800	M	70,100	70,500	63,400	M	M
Design	69,300	54,700	M	70,400	62,300	69,000	M	M
Teaching	48,200	48,600	42,300	62,600	35,400	70,700	M	M
Management, sales, and administration	76,000	70,600	60,200	87,500	66,700	73,800	53,900	108,600
Computer applications	62,600	54,100	M	65,800	61,100	56,700	43,600	M
Professional services/other	55,600	52,100	48,600	69,600	51,200	58,400	45,300	M

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 57. Median annual salaries of doctoral scientists and engineers, by field of doctorate and year of doctorate, 1993

Page 1 of 1

Field of doctorate	Total	1991-1992 grads	1985-1990 grads	1980-1984 grads	1970-1979 grads	1960-1969 grads	Pre-1960 grads
Total	$60,000	$40,600	$48,800	$59,000	$66,100	$72,300	$78,500
Sciences	60,000	40,600	48,800	59,000	66,100	72,300	78,500
Computer and mathematical sciences	57,800	46,000	50,400	55,800	62,900	62,900	75,800
Computer and information sciences	60,800	55,900	60,000	78,500	70,100	M	M
Mathemathical sciences	56,500	36,300	41,000	51,400	62,600	62,900	75,800
Life and related sciences	55,000	32,300	44,000	55,400	64,000	70,600	75,700
Agricultural and food sciences	53,100	36,500	45,800	53,100	60,400	68,500	M
Biological and health sciences	55,100	31,100	43,600	55,700	65,200	70,900	75,900
Environmental sciences	57,500	M	42,500	58,900	61,500	70,100	M
Physical and related sciences	64,100	38,000	52,000	64,400	71,700	73,300	78,700
Chemistry, except biochemistry	64,100	40,300	54,500	64,700	72,200	72,900	78,900
Geology and oceanography	60,100	40,700	43,600	60,200	66,200	73,600	M
Physics and astronomy	66,400	35,500	50,600	66,600	72,600	73,400	78,300
Other physical sciences (incl. earth)	48,500	M	44,600	M	M	M	M
Social and related sciences	52,100	39,300	43,800	51,100	59,400	62,900	72,700
Economics	61,400	45,200	50,500	55,900	70,300	73,000	90,000
Political and related sciences	52,200	36,600	39,100	46,500	60,300	63,600	M
Psychology	51,700	40,100	45,600	52,200	58,900	60,600	72,500
Sociology and anthropology	48,100	36,500	38,700	45,500	52,400	58,200	74,600
Other social sciences	50,200	37,300	42,400	50,400	55,800	62,200	M
Engineering	69,000	52,300	59,900	70,500	78,400	85,900	85,400
Aerospace/aeronautical	68,800	48,800	57,200	M	70,800	85,600	M
Chemical	72,000	57,600	61,500	72,800	83,000	90,400	88,700
Civil	63,700	45,000	54,800	68,200	70,900	80,200	M
Electrical/computer	72,500	56,400	63,900	75,000	81,500	85,400	85,100
Industrial	60,900	45,400	55,500	M	67,000	M	M
Mechanical	66,400	48,800	56,300	70,300	76,600	83,600	M
Other engineering	66,600	49,300	56,800	69,000	75,900	85,800	85,600

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 58. Median annual salaries of doctoral scientists and engineers, by geographic location and broad field of doctorate: 1993

Page 1 of 2

Geographic location	Total	Sciences	Computer and mathematical sciences	Life and related sciences	Physical and related sciences	Social and related sciences	Engineering
Total	$60,000	$56,500	$57,800	$55,000	$64,100	$52,100	$69,000
New England	59,300	55,500	62,900	52,300	63,200	52,200	70,700
Connecticut	65,100	63,300	64,000	62,500	71,400	52,700	72,700
Maine	50,900	48,800	M	43,800	M	52,600	M
Massachusetts	60,000	55,700	65,600	50,600	60,800	53,100	73,200
New Hampshire	50,900	48,000	M	50,900	59,800	40,700	61,600
Rhode Island	53,100	50,700	M	50,700	50,600	48,900	M
Vermont	51,200	49,700	M	41,700	M	49,300	60,400
Middle Atlantic	62,100	60,400	63,500	60,400	66,100	55,100	70,600
New Jersey	70,100	68,600	70,100	69,800	70,700	62,300	73,300
New York	60,200	58,600	60,600	58,200	63,800	54,800	68,400
Pennsylvania	59,000	55,600	60,900	55,600	60,800	51,500	68,800
East North Central	57,300	55,200	54,200	55,800	60,700	50,400	64,700
Illinois	60,100	57,700	60,000	57,300	60,400	55,400	68,000
Indiana	56,400	55,400	54,500	60,100	60,700	48,300	60,600
Michigan	59,800	56,800	54,400	57,800	63,400	50,700	65,100
Ohio	55,800	53,200	53,600	53,700	60,600	48,200	64,000
Wisconsin	52,100	50,600	44,900	50,900	58,400	50,100	63,400
West North Central	51,700	50,300	46,400	52,300	55,500	46,200	65,100
Iowa	54,300	52,600	45,500	54,800	57,100	50,800	68,500
Kansas	47,800	45,500	M	51,600	45,200	44,200	60,200
Minnesota	55,700	53,000	52,100	55,400	63,200	50,000	63,800
Missouri	50,800	48,900	45,400	51,100	55,300	45,100	65,900
North Dakota	44,400	42,200	M	44,300	M	M	M
Nebraska	52,300	51,000	M	54,800	51,500	45,900	M
South Dakota	42,900	42,800	M	50,200	M	M	M
South Atlantic	60,400	58,700	56,600	55,400	65,200	57,900	70,100
Delaware	70,300	68,000	M	64,000	72,400	M	84,900
Dist of Columbia	72,300	71,600	67,500	62,200	72,900	75,200	76,800
Florida	52,700	50,600	45,600	48,600	52,000	52,300	60,100
Georgia	53,200	51,800	52,400	53,900	52,500	47,100	72,100
Maryland	60,900	59,000	62,200	58,200	65,000	55,800	70,600
North Carolina	55,000	52,700	48,500	55,800	57,300	48,200	74,100
South Carolina	52,500	48,900	M	50,200	56,300	45,500	62,900
Virginia	62,200	60,000	61,300	52,100	70,700	56,600	75,000
West Virginia	52,800	52,100	M	50,500	58,900	M	57,800
East South Central	52,700	50,900	45,800	50,500	56,700	50,000	60,900
Alabama	55,300	53,600	51,900	54,900	60,100	50,500	63,900
Kentucky	47,000	46,400	42,200	48,600	58,100	45,000	55,600
Mississippi	50,100	48,000	M	49,400	47,700	46,700	68,900
Tennessee	53,500	52,300	42,000	48,800	58,200	53,000	58,800

See explanatory information and SOURCE at end of table.

Table 56. Median annual salaries of doctoral scientists and engineers, by geographic location and broad field of doctorate: 1993

Page 2 of 2

Geographic location	Total	Sciences	Computer and mathematical sciences	Life and related sciences	Physical and related sciences	Social and related sciences	Engineering
West South Central	$57,100	$52,700	$50,400	$50,600	$65,700	$46,800	$70,400
Arkansas	48,500	48,100	M	48,900	M	45,200	M
Louisiana	51,900	50,200	40,500	46,100	65,000	50,200	61,700
Oklahoma	50,400	47,400	M	46,400	50,600	46,100	75,100
Texas	60,500	55,900	52,800	53,500	68,300	47,400	71,200
Mountain	56,300	52,500	57,800	50,200	64,100	48,200	67,800
Arizona	51,800	50,400	M	50,000	62,100	49,300	65,300
Colorado	57,300	55,100	56,900	52,000	60,200	50,400	76,700
Idaho	51,100	49,300	M	49,100	M	M	70,600
Montana	44,500	44,600	M	48,400	M	M	M
New Mexico	68,000	66,500	70,000	50,700	70,700	38,700	72,600
Nevada	55,900	55,300	M	46,200	63,300	M	M
Utah	52,600	50,000	M	50,000	50,500	46,800	62,600
Wyoming	49,400	47,500	M	M	M	M	M
Pacific	62,000	60,300	65,700	55,700	67,800	55,000	72,100
Alaska	54,300	54,100	M	M	M	M	M
California	65,400	62,100	70,500	59,300	70,700	57,400	75,100
Hawaii	60,300	60,000	M	59,400	64,300	54,400	M
Oregon	50,900	50,100	56,400	48,900	58,400	45,500	55,600
Washington	55,700	54,400	64,100	52,100	56,900	54,200	62,700
U.S. possessions	41,400	40,400	M	42,400	26,500	43,000	45,500

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table 59. Median annual salaries of doctoral scientists and engineers, by geographic location and broad occupation: 1993

Page 1 of 2

Geographic location	Total	Scientists	Computer and mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Engineers	Non-S&E occupations
Total	$60,000	$52,700	$57,400	$50,800	$58,700	$49,300	$64,700	$72,000
New England	59,300	52,800	62,500	49,800	59,200	50,800	64,200	72,100
Connecticut	65,100	60,100	64,500	55,800	69,700	52,200	64,800	75,000
Maine	50,900	48,400	M	44,300	M	M	M	65,600
Massachusetts	60,000	52,800	65,400	48,500	57,800	51,400	67,000	75,200
New Hampshire	50,900	41,600	M	40,700	M	M	M	62,700
Rhode Island	53,100	52,100	M	50,300	M	48,700	M	59,300
Vermont	51,200	44,800	M	37,900	M	M	M	60,000
Middle Atlantic	62,100	56,900	63,300	55,600	60,700	51,600	65,600	75,900
New Jersey	70,100	65,300	69,500	63,300	66,200	59,500	70,100	85,300
New York	60,200	55,500	60,300	55,400	60,100	51,500	65,000	70,900
Pennsylvania	59,000	52,400	60,100	50,900	55,600	48,900	63,400	75,100
East North Central	57,300	52,200	53,200	53,300	55,800	47,200	62,300	67,800
Illinois	60,100	53,100	60,000	53,300	55,100	48,100	65,500	71,500
Indiana	56,400	52,100	50,900	56,900	55,200	46,400	56,900	75,100
Michigan	59,800	54,400	54,800	56,000	57,800	48,900	63,300	67,000
Ohio	55,800	50,600	50,200	52,100	56,900	46,000	62,000	65,500
Wisconsin	52,100	48,700	42,500	48,700	55,800	46,900	59,200	55,700
West North Central	51,700	46,500	48,100	50,800	50,400	45,200	60,200	62,400
Iowa	54,300	52,900	48,600	54,000	52,400	50,600	68,000	54,400
Kansas	47,800	45,600	M	47,200	46,300	45,300	57,500	51,600
Minnesota	55,700	50,500	51,500	51,200	55,800	47,600	60,400	75,400
Missouri	50,800	45,900	45,000	50,300	45,300	44,000	65,000	64,600
North Dakota	44,400	42,600	M	44,300	M	M	M	M
Nebraska	52,300	50,600	M	53,500	51,100	M	M	69,900
South Dakota	42,900	42,800	M	M	M	M	M	M
South Atlantic	60,400	52,800	57,200	50,300	58,000	50,500	62,600	73,300
Delaware	70,300	64,700	M	58,600	70,200	M	80,000	80,600
Dist of Columbia	72,300	63,700	62,600	55,300	65,200	69,500	60,500	82,500
Florida	52,700	46,200	46,500	44,200	50,200	45,400	58,800	62,400
Georgia	53,200	47,100	56,800	48,100	45,500	41,700	68,600	70,300
Maryland	60,900	55,100	60,300	52,000	60,600	50,400	63,800	73,400
North Carolina	55,000	49,700	48,400	50,100	55,200	45,800	63,300	65,700
South Carolina	52,500	46,500	46,500	47,900	55,400	45,100	58,800	64,000
Virginia	62,200	54,400	62,200	50,100	60,300	50,900	65,700	74,100
West Virginia	52,800	50,800	M	47,600	63,000	M	57,100	63,900
East South Central	52,700	46,700	46,200	48,800	50,200	43,600	58,300	65,200
Alabama	55,300	50,300	51,000	54,100	49,900	44,300	60,500	70,300
Kentucky	47,000	42,400	41,800	43,800	45,200	41,100	M	60,200
Mississippi	50,100	45,600	M	48,000	M	40,600	58,600	63,800
Tennessee	53,500	48,300	50,200	48,000	54,100	46,300	56,100	65,400

See explanatory information and SOURCE at end of table.

Table 59. Median annual salaries of doctoral scientists and engineers, by geographic location and broad occupation: 1993

Page 2 of 2

Geographic location	Total	Scientists	Computer and mathematical scientists	Life and related scientists	Physical and related scientists	Social and related scientists	Engineers	Non-S&E occupations
West South Central	$57,100	$50,200	$50,400	$48,900	$58,400	$45,700	$67,700	$68,100
Arkansas	48,500	46,100	M	48,100	M	45,300	M	52,900
Louisiana	51,900	47,900	43,500	44,300	58,100	47,200	61,100	62,000
Oklahoma	50,400	45,500	M	42,700	50,300	45,800	59,600	68,900
Texas	60,500	52,500	54,300	51,500	60,200	45,300	70,300	72,200
Mountain	56,300	50,400	52,900	45,700	60,500	45,800	64,300	69,200
Arizona	51,800	48,600	M	45,700	60,200	42,700	60,100	59,700
Colorado	57,300	50,700	55,700	46,700	54,300	50,000	66,100	70,600
Idaho	51,100	47,800	M	45,700	M	M	70,400	56,300
Montana	44,500	41,300	M	43,400	M	M	M	M
New Mexico	68,000	62,500	60,200	43,200	69,700	38,200	66,600	80,900
Nevada	55,900	55,000	M	M	55,600	M	M	M
Utah	52,600	46,200	55,100	45,800	45,800	41,500	62,100	64,300
Wyoming	49,400	47,600	M	M	M	M	M	M
Pacific	62,000	56,300	61,800	52,300	62,100	51,600	67,700	75,200
Alaska	54,300	51,300	M	M	M	M	M	M
California	65,400	60,000	66,800	53,100	65,300	52,600	70,200	79,800
Hawaii	60,300	54,900	M	58,000	60,200	51,400	M	70,600
Oregon	50,900	48,800	50,400	48,400	54,700	42,600	55,000	60,300
Washington	55,700	52,200	52,200	50,800	54,100	51,700	60,700	[illegible],500
U.S. possessions	41,400	37,600	M	38,400	25,600	42,700	M	48,200

KEY: M = Median salaries were not imputed for groups with fewer than 20 individuals reporting salary.

NOTES: All numbers in the table are estimates derived from a sample.
Median salaries were computed for full-time employed individuals who were not self-employed.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

APPENDIX A.
TECHNICAL NOTES

APPENDIX A. TECHNICAL NOTES

The data on doctoral scientists and engineers contained in this report come from the 1993 Survey of Doctorate Recipients (SDR). The SDR has been conducted biennially since 1973 by the National Research Council (NRC) for the National Science Foundation (NSF). Additional data on education and demographic information come from the National Research Council's Doctorate Records File (DRF). The DRF contains data from an ongoing census of research doctorates earned in the United States since 1920.

In 1993, as part of a large redesign of the NSF surveys of scientists and engineers, the SDR underwent significant revisions to improve data quality and relevance to policy and research interests:

- The survey instrument was expanded and redesigned; questions were retooled to improve validity and comparability with data from other NSF and federal surveys.
- While continuing intensive response followup efforts begun in 1991, the 1993 SDR restored the 30-percent sample loss of the previous survey round.
- Imputation was introduced to compensate for item nonresponse.

These changes, in particular the extensive instrument redesign, will affect comparability with SDR data from earlier years. The user should be cautious when using 1993 data in time-series or longitudinal analyses.

THE SAMPLING FRAME AND TARGET POPULATION

For the 1993 SDR the sampling frame for scientists and engineers was selected from the DRF to include individuals who

(1) had earned a doctoral degree from a U.S. college or university in a science or engineering field; and

(2) were U.S. citizens or, if non-U.S. citizens, indicated they had plans to remain in the United States after degree award; and

(3) were under 76 years of age as of April 1993 (the survey reference date).

The 1993 frame consisted of graduates who had earned their degrees between January 1942 and June 1992. Persons who did not meet the age criteria (or had died) were eliminated from the sample.

The survey has two additional eligibility criteria for the survey target population. The sampled member must be resident in the United States and not institutionalized as of the reference date.

SAMPLE DESIGN

In 1993, the SDR sample size was 49,228. This represented an increase of 30 percent over the 1991 survey. The total sample was selected from 3 groups:

(1) 1991 sample members who were still eligible in 1993,

(2) most of the 1989 sample members who had been cut from the 1991 sample, and

(3) a sample of the 1991-92 graduating cohort.

Group 1 cases were included with certainty because they are the core sample that is conveyed from year to year; groups 2 and 3 cases were sampled and added to the core sample to form the total sample.

The basic sample design was a stratified random sample. The variables used for stratification were 15 broad fields of degree, 2 genders, and an 8-category "group" variable combining race/ethnicity, handicap status, and citizenship status.

The *overall* sampling rate was about 1 in 11 (9 percent) in the 1993 SDR, applied to a population of 568,700. However sampling rates varied considerably within and between the strata. These differences resulted from oversampling of women, minority groups and other groups of special interest, and the accumulation of sample size adjustments over the years.

DATA COLLECTION

In 1993, there were 2 phases of data collection: a mail survey and telephone followup interviewing with nonrespondents. The mail survey consisted of an advance letter and 2 waves of a personalized mailing package, with a reminder postcard between waves 1 and 2. The first-wave mailing was sent in May 1993, with the followup mailing in June. As part of an experiment to test the effectiveness of Priority Mail, about one-third of the sample were sent a second followup mailing in July.

Phase 2 consisted of telephone interviewing. All nonrespondents to the mail survey were followed up using computer-assisted telephone interviewing (CATI). Telephone interviewing was conducted between September 1993 and February 1994.

SURVEY INSTRUMENT DESIGN AND CONTENT

In 1993, the SDR survey content and instrument went through a major redesign. The survey instrument, i.e., the wording and structure of the questions, changed greatly between 1991 and 1993. The format and layout of the questionnaires were changed to a more "respondent friendly" design to improve data quality. This included using a larger type size for improved readability, using graphical aids to indicate skip patterns, and using reverse printing to indicate answer spaces. The survey instrument was expanded from eight pages to twenty pages.

The survey content was also enhanced in 1993. These enhancements included

- the addition of new questions to gather information on such topics as degrees earned since receipt of the first doctorate, relationship of degree to current job, and reasons for making job changes;
- the expansion and modification of the sections on current employment and demographic characteristics to improve quality and validity; and
- replacing the concept of "employment field" to "occupation," allowing the analysis of the relationship of education to outcomes (occupation).

The reference period was changed to the "week of April 15th" from "September" in 1991 and "February" in earlier years. Thus, between the 1991 and 1993 surveys about 20 months had elapsed, as opposed to 32 months between the 1989 and 1991 surveys, and 24 months in predecessor years.

RESPONSE RATES

The overall response rate for the 1993 SDR was 88 percent. The response to the mail phase of the survey was about 61 percent. (Response rates were calculated as the weighted response divided by the in-scope sample cases.) Of the nonrespondents in the survey, it is estimated that about 40 percent were refusals, 35 percent were located but not interviewed, and 25 percent were not located.

DATA PREPARATION

As completed survey mail questionnaires were received, they were logged and transferred to the editing and coding unit at the NRC for processing. The coders carried out a variety of checks to prepare the documents for data entry. Specifically, they resolved incomplete or contradictory answers, imputed missing answers if logically appropriate, reviewed "other specify" responses for possible backcoding to a listed response, and assigned numeric codes to open-ended questions such as employer name.

Once questionnaires were edited and coded, they were sent to data entry. The data entry program contained a full complement of range and consistency checks to check for entry errors and inconsistent answers. The range and consistency checks were also applied to the CATI data via batch processing. Further computer checks were performed to test for inconsistent values; these were corrected and the process repeated until no inconsistencies remained.

At this point, the survey data file was ready for imputation of missing data. As a first step, basic frequency distributions were produced to show nonresponse rates to each question—these were generally less than 2 percent, with the exception of salary, which was 5.8 percent. Two methods for imputation were adopted. The first, cold decking, was used mainly for demographic variables that are static, i.e., not subject to change. Using this method, historical data provided by respondents in previous years were used to fill a missing response. For example, if a respondent indicated he was Asian in 1991, but left the item blank in 1993, then "Asian" was assigned to his race in 1993. In cases where no historical data were available, and for nondemographic variables (such as employment status, primary work activity, and salary), hot decking was used. This is the process of finding a donor with characteristics similar to the case with the missing value and using the response given by the donor as a proxy response. Hot decking involves creating groups of cases with common characteristics (through the cross-classification of auxiliary variables) and then selecting a donor at random for the case with the missing value. As a general rule, no data value was imputed from a donor in one cell to a recipient in another cell.

For a few variables, such as employer name and zip code, imputation was not performed.

WEIGHTING AND ESTIMATION

The next phase of the survey process involved weighting the survey data to compensate for unequal probabilities of selection to the sample and to adjust for the effects of unit nonresponse. The first step was the construction of sampling weights, which were calculated as the inverse of the probability of selection, taking into account all stages of the sample selection process over time. The sampling weight can be viewed as the number of population members the sample member represents. Sampling weights varied within cells because different sampling rates were used depending on the year of selection and the stratification in effect at that time.

The next step was to adjust the sampling weights for unit nonresponse. (Unit nonresponse occurs when the sample member refuses to participate or cannot be located.) This was done in a group of nonresponse adjustment cells created using poststratification. Within each nonresponse adjustment cell, a weighted nonresponse rate, which took into account both mail and CATI nonresponse, was calculated. The nonresponse adjustment factor was the inverse of this weighted response rate. The initial set of nonresponse adjustment factors was examined and, under certain conditions, some of the cells were collapsed if use of the adjustment factor would create excessive variance.

The final weights for respondents were calculated by multiplying their respective sample weights by the nonresponse adjustment factor. In data analysis, population estimates are made by summing the final weights of all respondents who possess a particular characteristic.

RELIABILITY[2]

The statistics in this report are subject to both sampling and nonsampling error. Sampling variability occurs because a sample rather than an entire population is surveyed. Sampling errors were developed using a generalized variance procedure in order to provide approximate sampling errors that would be applicable to a wide variety of items. As a result, these sampling errors provide an indication of the order of magnitude of a sampling error rather than a precise sampling error for any specific item.

Information provided in table A-3 permits the user to calculate approximate standard errors. The general form of the equation used to model the generalized variances is $V = a + b/x$, where V was modeled in relative standard error form.

The following computational form can be used for estimating the standard error of totals using the formula

$$S_x=[ax^2+bx]^{1/2}$$

where "x" equals the estimated total and "a" and "b" are the regression coefficients provided.

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[2] The data and material on sampling reliability presented here are from The Methodological Report of the 1993 Survey of Doctorate Recipients (Washington, D.C. Office of Scientific and Engineering Personnel, National Research Council, forthcoming).

Values of "a" and "b" by S&E fields for selected groups are given in table A-3.[3]

Tables A-4 through A-8 present approximate standard errors associated with totals for different segments of the doctoral population. Tables A-9 through A-13 present standard error estimates for the estimated percent[4] of a subgroup having a particular characteristic.

The approximate standard error of percentages also was developed using the same general model form. Standard errors for percentages may be estimated using the computational formula

$$S_p = p[b((1/x)-(1/y))]^{1/2}$$

where p equals the percentage possessing the specific characteristic and x and y represent the numerator and denominator, respectively, of the ratio that yields the observed percentage.

In addition to sampling error, data are subject to nonsampling error. Sources of nonsampling error include nonresponse bias, which arises when individuals who do not respond to a survey differ significantly from those who do, and measurement error, which arises when we are not able to precisely measure the variables of interest. These sources of error are much harder to estimate than sampling errors.

NOTES ON THE TABLES

The following notes facilitate use of data in the detailed tables.

Because of the changes (described above) introduced to the 1993 SDR, users are advised that data in this report are not comparable with SDR data published by NSF for prior survey years.

Field of doctorate is the field of degree as specified by the respondent in the Survey of Earned Doctorates at the time of degree conferral.

Occupation data were derived from responses to several questions on the kind of work done by the respondent. The occupational classification of the respondent was based on his or her principal job held during the reference week—or last job held, if not employed on the reference week (questions A17 and A5). Also used in the occupational classification was a respondent-selected job code (questions A18 and A6).

Sector of employment was based on responses to questions A13 and A16. The category "universities and 4-year colleges" includes 4-year colleges or universities, medical schools (including university-affiliated hospitals or medical centers), and university affiliated research institutions. "Private-for-Profit" includes self-employed in incorporated business.

Geographic division was based primarily on responses to question A10 on the location of employment. Individuals not reporting place of employment were classified by their mailing address.

Place Of Birth categories were defined as follows:

U.S. = Fifty states plus the Virgin Islands, Panama Canal Zone, Puerto Rico, American Samoa, Trust Territory, and Guam

Latin = Mexico, Central America, Cuba and America Islands

South America = Argentina, Bolivia, Brazil, Chile, Columbia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela

Northern Europe = Denmark, England, Finland, Iceland, Northern Ireland,

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[3] The generalized error estimates in this report were based on a set of assumptions that did not appear to hold in the case of some small subpopulations. In such cases, the parameters listed for a higher-level field within a demographic group or a higher-level demographic group within a field were considered a useful substitute as a generalized error estimate.

[4] The estimated percent is based on the ratio of two estimated totals, where the numerator is a subset of the denominator.

Republic of Ireland, Norway, Scotland, Sweden, Wales

Central Europe = Austria, Germany, Italy, Liechtenstein, Malta

Western Europe = Andorra, Belgium, France, Gibraltar, Luxembourg, Monaco, The Netherlands, Portugal, Spain, Switzerland

Eastern Europe = Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Czech Republic, Croatia, Estonia, Georgia, Greece, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, Tajikstan, Turkemnistan, Ukraine, Uzbekistan, Federal Republic of Yugoslavia

Eastern Asia = Cambodia, People's Republic of China, Taiwan, China Unspecified, Hong Kong, Japan, Republic of Korea, Korea Unspecified, Laos, Macao, Malaysia, Myanmar, Singapore, Thailand, Democratic Republic of Vietnam, Republic of Vietnam

Western Asia = Afghanistan, Bahrain, Bangladesh, Cyprus, India, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Nepal, Pakistan pre-1971, Palestine, Saudi Arabia, Sri Lanka, Syria, Turkey

Australasia = Australia, Indonesia, New Zealand,
Philippines

Africa = Algeria, Egypt, Ethopia, Ghana, Kenya, Libya, Morocco, Nigeria, South Africa, Sudan, Africa, not specified

Primary work activity was determined from responses to question A25. "Development" includes the development of equipment, products, and systems. "Design" includes the design of equipment, processes, and models.

Federal support was determined from responses to questions A31 and A32. The reference period used for these questions was changed in 1993. The 1993 questionnaire used "the week of" as the reference period whereas the 1991 questionnaire used "the past year."

Tenure status was obtained from the responses to question A15.

Salary data were derived from responses to question A29, in which information was requested regarding annual salary before deductions for income tax., social security, retirement, but excluding bonuses, overtime, and summer teaching. Salaries reported are median annual salaries, rounded to the nearest $100 and computed for full-time employed scientists and engineers only, excluding self-employed. For individuals employed by educational institutions, no accommodation was made to convert academic-year salaries to calendar-year salaries as in previous years. Prior to 1993, academic-year (9 to 10 months) salaries were multiplied by eleven-ninths to adjust to a calendar-year (11 to 12 months) scale.

Racial/ethnic data were based on responses to questions E5, E6, and E7. Individuals included in the Hispanic category are not included in other race/ethnicity categories as in previous years.

SELECTED EMPLOYMENT CHARACTERISTICS

This report contains several derived statistical measures reflecting labor force and employment rates as of April 1993:

Labor force participation rate. The labor force is defined as those employed (E) plus those unemployed (U—i.e., those not-employed persons actively seeking work). The labor force participation rate (R_{LF}) is the ratio of the labor force to the population (P).

$$R_{LF} = (E+U) / P$$

Unemployment rate. The unemployment rate (R_U) is the ratio of those who are unemployed but seeking employment (U) to the total labor force (E+U).

$$R_U = U / (E+U)$$

S&E involuntarily out-of-field rate. The S&E involuntarily out-of-field rate (R_{IOF}) is the ratio of those who are working part-time but seeking full-time jobs (E_{PTS}), or who are working outside their degree field when an S&E job would be preferred (E_{NSP}), to total employment (E_T).

$$R_{IOF}=(E_{PTS} + E_{NSP})/E_T$$

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Table A-1. Stratification, sample, and survey responses of doctoral scientists and engineers
1993 Survey of Doctorate Recipients

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Item	Sampling frame	Survey sample	Complete response	Ineligible response(1)	Non-response	Response rate(2)	Weighted response rate(3)
						(In Percent)	
Total	558,726	49,228	39,495	3,344	6,389	87.0	87.0
Field of doctorate							
Chemistry	64,352	4,284	3,492	245	547	87.2	87.7
Physics/astronomy	40,935	3,311	2,629	248	434	86.9	86.5
Earth/ocean/atmospheric sciences	16,781	1,457	1,201	121	135	90.7	90.4
Mathematical sciences	26,494	2,257	1,778	168	311	86.2	85.9
Computer and information sciences	7,347	781	645	53	83	89.4	89.8
Agricultural sciences	27,262	2,310	1,815	226	269	88.4	88.3
Medical sciences	15,828	2,524	2,099	127	298	88.2	88.4
NIH biological sciences	62,270	9,012	7,496	466	1,050	88.3	88.3
Other biological sciences	47,392	3,534	2,929	230	375	89.4	89.9
Psychology	80,610	5,792	4,745	231	816	85.9	85.8
Economics	22,372	1,389	1,021	143	225	83.8	84.7
Anthropology/archeology/sociology	23,890	1,862	1,473	167	222	88.1	89.4
Other social sciences	34,041	2,132	1,612	189	331	84.5	84.7
Electrical/electronics engineering	20,714	2,100	1,596	150	354	83.1	82.9
Other engineering	68,437	6,483	4,964	580	939	85.5	85.4
Demographic characteristics							
U.S. born disabled	14,378	1,559	1,350	105	104	93.3	93.9
White	414,154	32,209	27,013	1,396	3,800	88.2	88.2
Black	6,987	1,522	1,240	43	239	84.3	82.1
Asian	6,175	1,368	1,091	111	166	87.9	87.6
Hispanic	5,052	1,287	1,098	54	135	89.5	89.4
Native American	813	254	214	8	32	87.4	84.5
Foreign Born:							
U.S. Citizen	38,394	4,151	3,345	261	545	86.9	87.2
Foreign Citizen	72,774	6,878	4,144	1,366	1,368	80.1	79.0
Sex:							
Male	450,126	37,160	29,453	2,739	4,968	86.6	86.6
Female	108,600	12,068	10,042	605	1,421	88.2	88.6
Year of Doctorate:							
1964 or Earlier	73,037	6,007	4,625	533	849	85.9	85.8
1965 to 1974	154,420	11,253	8,925	699	1,629	85.5	85.7
1975 to 1984	170,655	14,496	11,699	837	1,960	86.5	86.6
1985 to 1992	160,614	17,472	14,246	1,275	1,951	88.8	89.2

(1)The 3,344 ineligible responses include the following: doctorates living outside the U.S. during the week of April 15, 1993 (2,849); deceased (447); those who were institutionalized during the week of April 15, 1993 (33); those over the age of 75 in April 1993 (15).

(2) The unweighted response rate is calculated as the total responses divided by the total sample.

(3) The weighted response rate is the total responses multiplied by their sample weights divided by the total sample multiplied by their sample weights.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table A-2. Classification of occupation categories
1993 Survey of Doctorate Recipients

Page 1 of 1

Total	010-500
Computer and mathematical scientists	052-054, 088, 172-176, 276,286
Computer and information scientists	052-054, 088
Mathematical scientists	172-176
Postsecondary teachers- Computer and mathematical sciences	276,286
Life and related scientists	021-025,027,271,273,287,297
Agricultural and food scientists	021
Biological scientists	22,23,25,27
Forestry and conservation scientists	024
Postsecondary teachers- Life and related sciences	271,273,287,297
Physical and related scientists	191-196,198,275,277,289
Chemists, except biochemists	192-195
Physicists and astronomers	191,196
Other physical scientists	198
Postsecondary teachers- Physical and related sciences	275,277,289
Social and related scientists	231-233,235-237,278,290,291,293,298
Economists	232
Political scientists	235
Psychologists	236
Sociologists and anthropologists	231,237
S&T historians and other social scientists	233
Postsecondary teachers- social and related sciences	278,290,291,293,298
Engineers	082-099
Aerospace and related engineers	082
Chemical engineers	085
Civil engineers and architectural engineers	086
Electrical and related engineers	087,089
Industrial engineers	091
Mechanical engineers	094
Other engineers	083,084,090,092,093,095-099
Postsecondary teachers- Engineering	280
Managers, administrators, etc.	141,151,152,153
Health and related occupations	111-114
Teachers, except S&E postsecondary teachers	251-257,272,274,279,281-285,288,292,294-296,299
Social services and related occupations	040,070,240
Technologists, etc.	026,051,081,100-104,175,197
Sales and marketing occupations	200-203
Other non-S&E occupations	010,031-033,110,120,130,171,221-223,234,401-405,500

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table A-3. Listing of a and b parameters for selected demographic groups in science and engineering fields: 1993

Page 1 of 2

Field of doctorate	Para-meter	All	Female	White	Asian	Black	Native American	Hispanic	1991-1992 Cohort	Foreign
Total...	a	-0.000026	-0.000087	-0.000031	0.000023	-0.000584	-0.001682	-0.000321	-0.000243	-0.000268
	b	13.4807	9.4488	14.7555	11.4803	11.3195	19.5898	12.8241	11.2384	13.6606
Sciences..	a	-0.00003	-0.000092	-0.000035	0.000109	-0.000611	-0.002595	-0.000392	-0.00031	-0.000317
	b	13.1188	9.6216	14.2786	10.5833	10.7617	20.8412	12.7033	11.5723	12.7707
Computer and mathematical sciences.....	a	-0.000436	-0.002083	-0.000539	-0.00055	0.026504	-0.002595 A	-0.014805	-0.003892	-0.003802
	b	14.7722	8.4849	15.5382	15.8133	3.3237	20.8412 A	17.5151	12.7888	16.3699
Computer and information sciences......	a	-0.001287	-0.01072	-0.000928	-0.002154	0.026504 A	-0.002595 A	0.066164	-0.006365	-0.009285
	b	7.374	9.0365	5.2277	11.7876	3.3237 A	20.8412 A	-0.101	9.9844	15.5477
Mathematical sciences......................	a	-0.000592	-0.002761	-0.000711	-0.000249	0.031535	-0.002595 A	-0.019405	-0.008632	-0.005853
	b	16.572	8.8828	17.2924	17.8797	2.8952	20.8412 A	19.2617	15.6722	16.242
Life and related sciences......................	a	-0.000068	-0.00021	-0.00007	-0.000333	-0.001365	0.023396	-0.003245	-0.000733	-0.00106
	b	10.5008	7.7745	10.2479	8.356	6.7359	6.6407	10.9185	9.2327	10.843
Agricultural and food sciences............	a	-0.000965	-0.008273	-0.000881	-0.00603	0.013928	0.023396 A	0.058986	-0.008643	-0.007744
	b	18.91	18.5587	16.9372	14.1452	11.0987	6.6407 A	3.2255	15.5029	11.3913
Biological and health sciences............	a	-0.000082	-0.000224	-0.000096	-0.000139	-0.000888	0.033779	-0.003999	-0.000792	-0.001167
	b	9.7304	7.6826	10.2144	6.6417	5.1324	5.2923	10.284	8.6238	9.7587
Environmental sciences.....................	a	-0.000825	0.08694	0.000183	-0.039187	-0.001365 A	0.023396 A	-0.003245 A	0.039506	-0.00106 A
	b	13.2739	8.5653	13.1489	8.3157	6.7359 A	6.6407 A	10.9185 A	4.1335	10.843 A
Physical and related sciences...............	a	-0.000105	-0.000733	-0.000116	0.000509	-0.002337	0.075976	0.044566	-0.001722	-0.001565
	b	11.9638	10.0464	11.9659	12.3645	11.3345	1.9313	-0.3042	15.4219	15.8263
Chemistry (except biochemistry)..........	a	-0.000233	-0.001095	-0.000274	0.000399	0.002105	0.117198	0.060822	-0.004239	-0.003472
	b	14.1584	10.3317	14.4516	18.1527	9.587	1.4224	-0.4249	19.8869	18.1085
Geology and oceanography.................	a	-0.000117	-0.003137	0.000055	0.021301	-0.002337 A	0.075976 A	0.001711	-0.00184	-0.011668
	b	5.2042	8.7875	5.2005	10.0215	11.3345 A	1.9313 A	7.8006	7.6584	9.5855
Physics and astronomy......................	a	-0.00026	-0.002154	-0.000224	0.002	-0.036344	0.075976 A	0.021624	-0.004709	-0.004833
	b	9.7357	7.2907	7.7329	7.5757	13.5051	1.9313 A	12.7457	12.6795	18.4509
Other physical sciences (incl. earth).....	a	-0.010099	-0.024718	-0.013421	0.000509 A	-0.002337 A	0.075976 A	0.044566 A	-0.001722 A	-0.001565 A
	b	15.6683	11.8182	16.7874	12.3645 A	11.3345 A	1.9313 A	-0.3042 A	15.4219 A	15.8263 A

See explanatory information and SOURCE at end of table.

Table A-3. Listing of a and b parameters for selected demographic groups in science and engineering fields, 1993

Page 2 of 2

Field of doctorate	Para-meter	All	Female	White	Asian	Black	Native American	Hispanic	1991-1992 Cohort	Foreign
Social and related sciences..................	a	-0.000106	-0.000211	-0.000126	0.002951	-0.001747	-0.01034	0.00203	-0.000963	-0.00031
	b	17.1274	10.7942	19.8368	8.761	13.9896	28.448	8.0308	12.012	11.3849
Economics....................................	a	0.000155	-0.00265	0.000256	-0.003223	0.007075	-0.01034 A	-0.012584	-0.008736	0.000008
	b	5.5617	9.1667	6.1031	13.0079	10.5077	28.448 A	17.3121	13.8932	14.2976
Political and related sciences..............	a	0.000203	-0.001252	-0.000219	0.021517	-0.013924	-0.01034 A	0.018067	0.017476	-0.019238
	b	21.6853	7.8887	24.3464	7.164	12.9067	28.448 A	9.4545	18.1652	17.4818
Psychology....................................	a	-0.000248	-0.000398	-0.000305	-0.006483	-0.005128	-0.043994	0.006116	-0.001529	-0.007936
	b	19.4297	12.6593	23.1564	12.047	16.06	21.8878	9.085	10.295	12.6249
Sociology and anthropology.................	a	-0.000434	-0.000914	-0.000337	-0.000588	-0.004615	0.237751	0.008481	-0.010177	-0.009831
	b	10.8057	7.7608	10.8995	9.8625	7.3213	2.2494	5.1302	16.8065	10.0883
Other social sciences.........................	a	-0.001757	-0.003642	-0.002411	0.033866	0.011698	-0.01034 A	-0.021878	0.007272	-0.002512
	b	34.2312	19.775	36.6809	5.5432	8.4963	28.448 A	15.6461	10.7535	12.6597
Engineering......................................	a	-0.000168	-0.00114	-0.000247	-0.000131	-0.000369	0.053005	-0.003625	-0.001113	-0.001088
	b	15.4463	5.8969	17.9521	12.966	12.6337	5.8591	15.5614	10.1213	15.158
Aeronautical/astronautical..................	a	0.003337	-0.00114 A	0.006919	0.014224	-0.000369 A	0.053005 A	-0.003625 A	-0.045483	0.019269
	b	21.496	5.8969 A	15.8536	21.2146	12.6337 A	5.8591 A	15.5614 A	18.7643	28.8743
Chemical...	a	-0.001168	0.009568	-0.001098	0.007662	-0.036776	0.053005 A	-0.054127	0.009251	-0.002974
	b	16.0952	6.5425	14.4934	10.4239	7.8726	5.8591 A	21.8558	12.649	5.8529
Civil...	a	0.023625	0.100001	0.035403	0.011251	0.415796	0.053005 A	0.026623	-0.008256	0.008091
	b	6.6643	-1.5049	9.5672	7.8789	1.2209	5.8591 A	5.6919	11.674	18.9503
Electrical and computer......................	a	-0.000705	-0.004224	-0.001047	-0.001236	-0.033401	0.053005 A	0.027241	-0.003072	-0.002218
	b	15.9092	6.6965	16.0281	11.2709	17.5812	5.8591 A	12.7841	10.504	10.6947
Industrial...	a	-0.005265	0.006136	-0.010131	0.029049	-0.000369 A	0.053005 A	-0.003625 A	0.040079	0.001834
	b	18.2552	9.3775	22.5415	11.7912	12.6337 A	5.8591 A	15.5614 A	13.3863	4.4499
Mechanical.......................................	a	-0.000772	-0.006733	-0.001164	-0.005297	0.151036	0.053005 A	0.064669	-0.001254	-0.003204
	b	12.9926	6.4313	14.2553	18.1881	1.8698	5.8591 A	5.443	10.7044	6.1314
Other...	a	0.001212	-0.006641	0.001562	0.005771	0.023358	0.053005 A	-0.03277	-0.000695	-0.002171
	b	12.4211	10.6038	14.8129	11.631	8.6545	5.8591 A	14.2987	7.4486	21.8262

KEY: A = Direct estimates are not available; data shown are considered useful approximations.

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table A-4. Approximate standard errors of estimated number of doctoral scientists and engineers by field of doctorate: 1993

Page 1 of 1

Estimated number	Total	Sciences: Total sciences	Sciences: Computer & Math sciences	Sciences: Life sciences	Sciences: Physical sciences	Sciences: Social sciences	Engineering: Total engineering	Engineering: Chemical	Engineering: Civil	Engineering: Electrical/ computer	Engineering: Mechanical
50	30	30	30	20	20	30	30	30	20	30	30
100	40	40	40	30	30	40	40	40	30	40	40
200	50	50	50	50	50	60	60	60	50	60	50
500	80	80	90	70	80	90	90	90	100	90	80
700	100	100	100	90	90	110	100	100	130	100	90
1,000	120	110	120	100	110	130	120	120	170	120	110
2,500	180	180	180	160	170	210	190	180	410	190	170
5,000	260	250	250	230	240	290	270	230	790	250	210
10,000	360	360	320	310	330	400	370	210	--	300	230
25,000	570	560	310	470	480	600	530	--	--	--	--
50,000	780	760	--	600	580	770	590	--	--	--	--
75,000	930	900	--	640	550	830	630	--	--	--	--
100,000	1,040	1,010	--	610	380	810	--	--	--	--	--
150,000	1,200	1,140	--	--	--	430	--	--	--	--	--
200,000	1,290	1,190	--	--	--	--	--	--	--	--	--
250,000	1,320	1,190	--	--	--	--	--	--	--	--	--
300,000	1,310	1,110	--	--	--	--	--	--	--	--	--
400,000	1,110	670	--	--	--	--	--	--	--	--	--
500,000	490	--	--	--	--	--	--	--	--	--	--

KEY: "--" = Not applicable

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table A-5. Approximate standard errors of estimated number of women doctoral scientists and engineers by field of doctorate: 1993

Page 1 of 1

Estimated number	Total	Sciences: Total sciences	Sciences: Computer & Math sciences	Sciences: Life sciences	Sciences: Physical sciences	Sciences: Social sciences	Engineering: Total engineering	Engineering: Chemical	Engineering: Civil	Engineering: Electrical/ computer	Engineering: Mechanical
50	20	20	20	20	20	20	20	20	10	20	20
100	30	30	30	30	30	30	20	40	30	30	20
200	40	40	40	40	40	50	30	--	--	30	--
500	70	70	60	60	70	70	50	--	--	--	--
700	80	80	70	70	80	90	60	--	--	--	--
1,000	100	100	80	90	100	100	70	--	--	--	--
2,500	150	150	--	130	140	160	90	--	--	--	--
5,000	210	210	--	180	180	220	--	--	--	--	--
10,000	290	290	--	240	160	290	--	--	--	--	--
25,000	430	430	--	250	--	--	--	--	--	--	--
50,000	500	500	--	--	--	--	--	--	--	--	--
75,000	470	450	--	--	--	--	--	--	--	--	--
100,000	270	210	--	--	--	--	--	--	--	--	--

KEY: "--" = Not applicable

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table A-6. Approximate standard errors of estimated number of black doctoral scientists and engineers by field of doctorate: 1993

Page 1 of 1

Estimated number	Total	Sciences					Engineering				
		Total sciences	Computer & Math sciences	Life sciences	Physical sciences	Social sciences	Total engineering	Chemical	Civil	Electrical/ computer	Mechanical
50	20	20	20	20	20	30	30	20	30	30	20
100	30	30	20	30	30	40	40	--	70	40	40
200	50	50	40	40	50	50	50	--	--	50	--
500	70	70	--	60	70	80	80	--	--	--	--
700	90	90	--	60	80	90	90	--	--	--	--
1,000	100	100	--	70	90	110	--	--	--	--	--
2,500	160	150	--	--	--	160	--	--	--	--	--
5,000	200	250	--	--	--	--	--	--	--	--	--
10,000	230	--	--	--	--	--	--	--	--	--	--

KEY: "--" = Not applicable

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table A-7. Approximate standard errors of estimated number of Asian doctoral scientists and engineers by field of doctorate: 1993

Page 1 of 1

Estimated number	Total	Sciences					Engineering				
		Total sciences	Computer & Math sciences	Life sciences	Physical sciences	Social sciences	Total engineering	Chemical	Civil	Electrical/ computer	Mechanical
50	20	20	30	20	20	20	30	20	20	20	30
100	30	30	40	30	40	30	40	30	30	30	40
200	50	50	60	40	50	40	50	50	50	50	60
500	80	70	90	60	80	70	80	80	80	70	90
700	90	90	100	80	90	90	90	110	110	90	100
1,000	110	100	120	90	110	110	110	130	140	100	110
2,500	170	160	190	140	180	200	170	270	--	140	--
5,000	240	240	--	180	270	--	230	--	--	--	--
10,000	340	340	--	220	420	--	300	--	--	--	--
25,000	550	580	--	--	--	--	--	--	--	--	--
50,000	790	--	--	--	--	--	--	--	--	--	--

KEY: "--" = Not applicable

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table A-8. Approximate standard errors of estimated number of Hispanic doctoral scientists and engineers by field of doctorate: 1993

Page 1 of 1

Estimated number	Total	Sciences					Engineering				
		Total sciences	Computer & Math sciences	Life sciences	Physical sciences	Social sciences	Total engineering	Chemical	Civil	Electrical/ computer	Mechanical
50	30	30	30	20	10	20	30	30	30	30	20
100	40	40	40	30	20	30	40	40	40	40	30
200	50	50	50	50	40	40	50	50	--	50	--
500	80	80	70	70	100	70	80	--	--	--	--
700	90	90	70	80	150	80	100	--	--	--	--
1,000	110	110	--	90	210	100	110	--	--	--	--
2,500	170	170	--	80	--	180	--	--	--	--	--
5,000	240	230	--	--	--	--	--	--	--	--	--
10,000	310	--	--	--	--	--	--	--	--	--	--

KEY: "--" = Not applicable

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table A-9. Approximate standard errors for estimated percents of doctoral scientists and engineers: 1993

Page 1 of 1

Base number of percent	Estimated percent						
	1 or 99	2 or 98	5 or 95	10 or 90	15 or 85	25 or 75	50
50	5.2	7.3	11.3	15.6	18.5	22.5	26.0
100	3.7	5.1	8.0	11.0	13.1	15.9	18.4
200	2.6	3.6	5.7	7.8	9.3	11.2	13.0
500	1.6	2.3	3.6	4.9	5.9	7.1	8.2
700	1.4	1.9	3.0	4.2	5.0	6.0	6.9
1,000	1.2	1.6	2.5	3.5	4.1	5.0	5.8
2,500	0.7	1.0	1.6	2.2	2.6	3.2	3.7
5,000	0.5	0.7	1.1	1.6	1.9	2.2	2.6
10,000	0.4	0.5	0.8	1.1	1.3	1.6	1.8
25,000	0.2	0.3	0.5	0.7	0.8	1.0	1.2
50,000	0.2	0.2	0.4	0.5	0.6	0.7	0.8
75,000	0.1	0.2	0.3	0.4	0.5	0.6	0.7
100,000	0.1	0.2	0.3	0.3	0.4	0.5	0.6
150,000	0.1	0.1	0.2	0.3	0.3	0.4	0.5
200,000	0.1	0.1	0.2	0.2	0.3	0.4	0.4
250,000	0.1	0.1	0.2	0.2	0.3	0.3	0.4
300,000	0.1	0.1	0.1	0.2	0.2	0.3	0.3
400,000	0.1	0.1	0.1	0.2	0.2	0.3	0.3
500,000	0.1	0.1	0.1	0.2	0.2	0.2	0.3

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table A-10. Approximate standard errors for estimated percents of women scientists and engineers: 1993

Page 1 of 1

Base number of percent	Estimated percent						
	1 or 99	2 or 98	5 or 95	10 or 90	15 or 85	25 or 75	50
50	4.3	6.1	9.5	13.0	15.5	18.8	21.7
100	3.1	4.3	6.7	9.2	11.0	13.3	15.4
200	2.2	3.0	4.7	6.5	7.8	9.4	10.9
500	1.4	1.9	3.0	4.1	4.9	6.0	6.9
700	1.2	1.6	2.5	3.5	4.1	5.0	5.8
1,000	1.0	1.4	2.1	2.9	3.5	4.2	4.9
2,500	0.6	0.9	1.3	1.8	2.2	2.7	3.1
5,000	0.4	0.6	0.9	1.3	1.6	1.9	2.2
10,000	0.3	0.4	0.7	0.9	1.1	1.3	1.5
25,000	0.2	0.3	0.4	0.6	0.7	0.8	1.0
50,000	0.1	0.2	0.3	0.4	0.5	0.6	0.7
75,000	0.1	0.2	0.2	0.3	0.4	0.5	0.6
100,000	0.1	0.1	0.2	0.3	0.3	0.4	0.5

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table A-11. Approximate standard errors for estimated percents of black scientists and engineers: 1993

Page 1 of 1

Base number of percent	Estimated percent						
	1 or 99	2 or 98	5 or 95	10 or 90	15 or 85	25 or 75	50
50	4.7	6.7	10.4	14.3	17.0	20.6	23.8
100	3.3	4.7	7.3	10.1	12.0	14.6	16.8
200	2.4	3.3	5.2	7.1	8.5	10.3	11.9
500	1.5	2.1	3.3	4.5	5.4	6.5	7.5
700	1.3	1.8	2.8	3.8	4.5	5.5	6.4
1,000	1.1	1.5	2.3	3.2	3.8	4.6	5.3
2,500	0.7	0.9	1.5	2.0	2.4	2.9	3.4
5,000	0.5	0.7	1.0	1.4	1.7	2.1	2.4
10,000	0.3	0.5	0.7	1.0	1.2	1.5	1.7

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table A-12. Approximate standard errors for estimated percents of Asian scientists and engineers: 1993

Page 1 of 1

Base number of percent	Estimated percent						
	1 or 99	2 or 98	5 or 95	10 or 90	15 or 85	25 or 75	50
50	4.8	6.7	10.4	14.4	17.1	20.7	24.0
100	3.4	4.7	7.4	10.2	12.1	14.7	16.9
200	2.4	3.4	5.2	7.2	8.6	10.4	12.0
500	1.5	2.1	3.3	4.5	5.4	6.6	7.6
700	1.3	1.8	2.8	3.8	4.6	5.5	6.4
1,000	1.1	1.5	2.3	3.2	3.8	4.6	5.4
2,500	0.7	0.9	1.5	2.0	2.4	2.9	3.4
5,000	0.5	0.7	1.0	1.4	1.7	2.1	2.4
10,000	0.3	0.5	0.7	1.0	1.2	1.5	1.7
25,000	0.2	0.3	0.5	0.6	0.8	0.9	1.1
50,000	0.2	0.2	0.3	0.5	0.5	0.7	0.8

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

Table A-13. Approximate standard errors for estimated percents of Hispanic scientists and engineers: 1993

Page 1 of 1

Base number of percent	Estimated percent						
	1 or 99	2 or 98	5 or 95	10 or 90	15 or 85	25 or 75	50
50	5.0	7.1	11.0	15.2	18.1	21.9	25.3
100	3.6	5.0	7.8	10.7	12.8	15.5	17.9
200	2.5	3.5	5.5	7.6	9.0	11.0	12.7
500	1.6	2.2	3.5	4.8	5.7	6.9	8.0
700	1.3	1.9	2.9	4.1	4.8	5.9	6.8
1,000	1.1	1.6	2.5	3.4	4.0	4.9	5.7
2,500	0.7	1.0	1.6	2.1	2.6	3.1	3.6
5,000	0.5	0.7	1.1	1.5	1.8	2.2	2.5
10,000	0.4	0.5	0.8	1.1	1.3	1.6	1.8

SOURCE: National Science Foundation/SRS, 1993 Survey of Doctorate Recipients

APPENDIX B.
SURVEY QUESTIONNAIRE

1993 Survey [illegible]

[illegible]

[illegible]

Thank [illegible] this important [illegible] are presented with [illegible] will apply to every-one, you [illegible] questions.

- [illegible] we will be asking you to refer to the [illegible] when answering most questions
- If no [illegible] provided, you should continue to the next [illegible]
- [illegible]
- When [illegible] marking a box, please use [illegible]
- If you [illegible] please make sure that your old answer is [illegible] or clearly crossed out

Thank [illegible] appreciate it.

PART A - Employment Status During the Week of April 15, 1993

A1. Were you working for pay (or profit) during the week of April 15, 1993? This includes a postdoctoral appointment, being self-employed or temporarily absent from a job (e.g., illness, vacation, or parental leave), even if unpaid.

1 ☐ Yes → *SKIP to A7*
2 ☐ No

A2. ***(IF NO)*** **Did you look for work at any time during the four weeks preceding April 15?**

1 ☐ Yes
2 ☐ No

A3. What were your reasons for not working during the week of April 15?

Mark (X) all that apply
1 ☐ Retired
2 ☐ On layoff from a job
3 ☐ Student
4 ☐ Family responsibilities
5 ☐ Chronic illness or permanent disability
6 ☐ Suitable job not available
7 ☐ Did not need or want to work
8 ☐ Other - *Specify*

____

____

A4. In what month and year did you last work for pay (or profit)?

☐ *Mark this box (X) if you have NEVER worked for pay (or profit) and then SKIP to Part D, page 10*

Month Year
LAST WORKED: __|__ 19 __|__

A5. What kind of work were you doing on your last job—that is, what was your occupation? *Please be as specific as possible, including any area of specialization.*

Example: College Professor - Electrical Engineering

____

____

A6. Using the JOB CODES (pages 14-15), choose the code that BEST describes the work you were doing on your last job.

CODE
__|__|__ → *SKIP to Part B, page 7*

A7. ***(IF WORKING WEEK OF APRIL 15TH)*** **Counting all jobs held during the week of April 15, were you employed full-time or part-time?**

1 ☐ **Full-time** (usually worked a total of 35 or more hours per week) → *SKIP to A9*

2 ☐ **Part-time** (usually worked less than 35 hours per week)

A8. ***(IF PART-TIME)*** **What were your reasons for working part-time rather than full-time during the week of April 15?**

Mark (X) all that apply

1 ☐ Retired or semi-retired → 19 __|__ Year
2 ☐ Student
3 ☐ Family responsibilities
4 ☐ Chronic illness or permanent disability
5 ☐ Suitable full-time job not available
6 ☐ Did not need or want to work full-time
7 ☐ Other - *Specify*

____

SKIP to A10, page 2

A9. ***(IF FULL-TIME)*** **Although you were working during the week of April 15, had you previously RETIRED from any position?**

Examples of retirement include mandatory retirement, early retirement, or voluntary retirement

Year
1 ☐ Yes → 19 __|__
2 ☐ No

[redacted]

A10. Who was your principal employer during the week of April 15?

If you had more than one job that week - Your principal employer is the one for whom you worked the most hours that week.

Employer Name

____

City/Town

____

State/Foreign Country

____

Zip Code

____

A11. Was this job a POSTDOCTORAL appointment, that is, a temporary appointment in academia, industry, or government, primarily for providing continued education or training in research?

1 ☐ Yes
2 ☐ No

A12. Was your employer an educational institution?

1 ☐ Yes
2 ☐ No → *SKIP to A16*

A13. *(IF YES)* **Was this educational institution...**

Mark (X) one

1 ☐ An elementary, middle, or secondary school or system → *SKIP to A17, page 3*
2 ☐ A 2-year college, junior college, technical institute
3 ☐ A 4-year college or university, other than a medical school
4 ☐ A medical school (including university-affiliated hospital or medical center)
5 ☐ A university-affiliated research institute
6 ☐ Other - *Specify*

____

A14. What was your faculty rank?

Mark (X) one

1 ☐ Not applicable at this institution
2 ☐ Not applicable for my position
3 ☐ Professor
4 ☐ Associate professor
5 ☐ Assistant professor
6 ☐ Instructor
7 ☐ Lecturer
8 ☐ Adjunct faculty
9 ☐ Other - *Specify*

____

A15. What was your tenure status?

Mark (X) one

1 ☐ Not applicable: no tenure system at this institution
2 ☐ Not applicable: no tenure system for my position
3 ☐ Tenured
4 ☐ On tenure track but not tenured
5 ☐ Not on tenure track

→ *SKIP to A17, page 3*

A16. *(IF NOT EDUCATIONAL INSTITUTION)*
Was your employer- *Mark (X) one*

1 ☐ A PRIVATE-FOR-PROFIT company, business or individual, working for wages, salary or commissions
2 ☐ A PRIVATE NOT-FOR-PROFIT, tax-exempt, or charitable organization
3 ☐ SELF-EMPLOYED in own NOT INCORPORATED business, professional practice, or farm
4 ☐ SELF-EMPLOYED in own INCORPORATED business, professional practice, or farm
5 ☐ Local GOVERNMENT (city, county, etc.)
6 ☐ State GOVERNMENT
7 ☐ U.S. military service, active duty or Commissioned Corps (e.g., USPHS, NOAA)
8 ☐ U.S. GOVERNMENT (civilian employee)
9 ☐ Other - *Specify*

____

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A17. What kind of work were you doing on your principal job during the week of April 15th— that is, what was your occupation? *Please be as specific as possible, including any area of specialization.*

Example: College Professor - Electrical engineering

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

A18. Using the JOB CODES (pages 14-15), choose the code that BEST describes the work you were doing on your principal job during the week of April 15.

CODE

☐☐☐

A19. Did you record job code "141" in A18?

1☐ Yes

2☐ No → *SKIP to A21*

A20. *(IF YES)* **Did your duties on this job require technical expertise equivalent to at least a bachelor's degree in -**

Mark (X) Yes or No for each

	Yes	No
a. engineering, computer science, math or the natural sciences	1☐	2☐
b. the social sciences	1☐	2☐

A21. In some occupational areas, licensing or certification is recommended or required. As of the week of April 15, were you licensed or certified in your occupation? Do not include academic degrees.

1☐ Licensing, certification not recommended or required

2☐ Yes

3☐ No

A22. Thinking about the relationship between your work and your education, to what extent was your work on your principal job held during the week of April 15 related to your first doctoral degree awarded in the U.S.? Was it -

1☐ Closely related → *SKIP to A25, page 4*

2☐ Somewhat related → *SKIP to A25, page 4*

3☐ Not related

A23. *(IF NOT RELATED)* **Did these factors influence your decision to work in an area OUTSIDE THE FIELD OF YOUR FIRST U.S. DOCTORAL DEGREE?**

Mark (X) Yes or No for each

	Yes	No
a. Pay, promotion opportunities	1☐	2☐
b. Working conditions (hours, equipment, working environment)	1☐	2☐
c. Job location	1☐	2☐
d. Change in career or professional interests	1☐	2☐
e. Family-related reasons.......................	1☐	2☐
f. Job in doctoral degree field not available	1☐	2☐
g. Other reason - *Specify*	1☐	2☐

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

A24. Which factor in A23 represents your MOST important reason for working in an area outside the field of your first U.S. doctoral degree?

_ _ _ *Enter letter of MOST IMPORTANT reason from Question A23 above.*

A25. The next question is about your work activities on your principal job. Did the following work activities occupy 10 percent or more of your time during a TYPICAL work week on this job?

Mark (X) Yes or No for each

		Yes	No
A.	Accounting, finance, contracts	1☐	2☐
B.	Applied research - study directed toward gaining scientific knowledge to meet a recognized need	1☐	2☐
C.	Basic research - study directed toward gaining scientific knowledge primarily for its own sake..................	1☐	2☐
D.	Computer applications, programming, systems development	1☐	2☐
E.	Development - using knowledge gained from research for the production of materials, devices	1☐	2☐
F.	Design of equipment, processes, structures, models............................	1☐	2☐
G.	Employee relations - including recruiting, personnel development, training	1☐	2☐
H.	Management and administration	1☐	2☐
I.	Production, operations, maintenance (e.g., truck driver, machinist or mechanic)	1☐	2☐
J.	Professional services (health care, financial services, legal services, etc.)	1☐	2☐
K.	Sales, purchasing, marketing...........	1☐	2☐
L.	Quality or productivity management .	1☐	2☐
M.	Teaching	1☐	2☐
N.	Other - *Specify* →	1☐	2☐

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _

A26. On which TWO activities in A25 did you work the MOST hours during a typical week on this job?

a. _ _ _ Activity MOST hours

b. _ _ _ Activity SECOND MOST hours - *Enter Z if no second most*

A27. Did you supervise the work of others as part of this job?

Answer Yes if you assign duties to workers AND recommend or initiate personnel actions such as hiring, firing, or promoting.

1☐ Yes
2☐ No → *Skip to A29*

A28. *(IF YES)* **How many people did you typically -**

	Number supervised
a. supervise DIRECTLY? ...	_ _ _ _
b. supervise through subordinate supervisors? ..	_ _ _ _

A29. Before deductions, what was your salary on this job during the week of April 15?
Do NOT include bonuses, overtime, or additional compensation for summertime teaching or research

IF NOT SALARIED, please estimate your earned income, excluding business expenses.

Salary or earned income

$_ _ _ _ _ _ _ per

Mark (X) one

1☐ Hour
2☐ Week
3☐ Month
4☐ Year
5☐ Academic Year
6☐ Other - *Specify*

_ _ _ _ _ _

A30. Was this salary or earned income based on working full-time?

If SELF-EMPLOYED, please answer "Yes" if you usually worked 35 or more hours a week on this job

1☐ Yes
2☐ No

A31. Was any of your work on this job supported by CONTRACTS OR GRANTS from the U.S. government during the week of April 15?

FEDERAL EMPLOYEES, please answer "No"

Mark (X) one

1☐ Yes
2☐ No
3☐ Don't know

→ *SKIP to A33*

A32. *(IF YES)* **Which Federal agencies or departments were supporting your work?**

Mark (X) all that apply

1☐ Agency for International Development (AID)
2☐ Agriculture Department
3☐ Commerce Department
4☐ Defense Department (DOD)
5☐ Department of Education (include NCES, OERI, FIPSE, FIRST)
6☐ Energy Department (DOE)
7☐ Environmental Protection Agency (EPA)
8☐ Health and Human Services Department (excluding NIH)
9☐ Housing and Urban Development Department (HUD)
10☐ Interior Department
11☐ Justice Department
12☐ Labor Department
13☐ National Aeronautics and Space Administration (NASA)
14☐ National Institutes of Health (NIH)
15☐ National Science Foundation (NSF)
16☐ Nuclear Regulatory Commission (NRC)
17☐ State Department
18☐ Transportation Department (DOT)
19☐ Veterans Administration
20☐ Other - *Specify*

21☐ DON'T KNOW SOURCE AGENCY

A33. From the following list of selected areas, indicate the ONE area, if any, to which you devoted the MOST hours during a typical week on this job.

Mark (X) one

1☐ Energy/Fuel
2☐ Environment
3☐ Health/Safety
4☐ National Defense
5☐ NONE OF THE ABOVE

→ *SKIP to A36, page 6*

A34. *(IF ENERGY/FUEL)* **From the following list, indicate the ONE ENERGY SOURCE that involved the largest proportion of your energy-related work during the past year.**

Mark (X) one

1☐ Coal
2☐ Petroleum and natural gas
3☐ Nuclear fission
4☐ Nuclear fusion
5☐ Hydroenergy
6☐ Other renewables (such as solar, biomass, wind, geothermal)
7☐ Other energy source - *Specify*

A35. From the following list, indicate the ONE ENERGY-RELATED ACTIVITY that involved the largest proportion of your energy-related work during the past year.

Mark (X) one

1☐ Exploration and extraction
2☐ Manufacture of energy-related equipment
3☐ Fuel processing *(include refining and enriching)*
4☐ Electric power generation and transmission
5☐ Transportation and distribution of fuel
6☐ Waste management or decommissioning
7☐ Conservation, utilization, management, or storage of energy/fuel
8☐ Environment, health, and safety
9☐ Other energy source - *Specify*

A36. During the week of April 15, did you hold a second job (or business), including part-time, evening or weekend work?

1☐ Yes
2☐ No → *SKIP to Part B, page 7*

A37. *(IF YES)* **What kind of work were you doing at your second job during the week of April 15 — that is, what was your occupation?** *Please be as specific as possible, including any area of specialization.*

Example: College professor - Electrical engineering

If you had MORE THAN TWO JOBS, answer for the job at which you worked the second greatest number of hours that week.

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

A38 Using the JOB CODES (pages 14-15) choose the code that BEST describes the work you were doing on your second job during the week of April 15.

CODE

_ | _ | _

A39. Before deductions, what was your salary on your second job during of the week of April 15?
Do NOT include bonuses, overtime, or additional compensation for summertime teaching or research.

IF NOT SALARIED, please estimate your earned income, excluding business expenses.

Salary or earned income

Mark (X) one

$_ _ _ _ _ _ _ per 1☐ Hour
2☐ Week
3☐ Month
4☐ Year
5☐ Academic Year
6☐ Other - *Specify*

_ _ _ _ _ _ _

A40. To what extent was your work on this second job related to your first doctoral degree awarded in the U.S.? Was it -

Mark (X) one

1☐ closely related
2☐ somewhat related
3☐ not related

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PART B - Past Employment

[redacted]

B1. Thinking back 5 years, were you working for pay (or profit) during any part of April 1988?

If you were a STUDENT, count jobs required as part of a financial aid award (e.g., work study/ assistantships), but do NOT count financial aid awards with no work requirement.

1 ☐ Yes

2 ☐ No → *SKIP to Part C, page 9*

B2. *(IF YES)* **Did you have the SAME principal employer during both April 1988 and April 15, 1993?**

If self-employed at both times, answer "Yes"

1 ☐ Yes, same employer → *SKIP to B6*

2 ☐ No, different employer or had no employer during the week of April 15, 1993

B3. *(IF NO)* **Was your principal employer during April 1988 an educational institution?**

1 ☐ Yes
2 ☐ No → *SKIP to B5*

B4. *(IF YES)* **Was this educational institution -**

Mark (X) one

1 ☐ An elementary, middle, or secondary school or system

2 ☐ A 2-year college, junior college, technical institute

3 ☐ A 4-year college or university, other than a medical school

4 ☐ A medical school (including university-affiliated hospital or medical center)

5 ☐ A university-affiliated research institute

6 ☐ Other- *Specify*

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _

SKIP to B6

B5. *(IF NOT EDUCATIONAL INSTITUTION)* **Was your employment during April 1988 with -**

Mark (X) one

1 ☐ A PRIVATE-FOR-PROFIT company, business or individual, working for wages, salary or commissions

2 ☐ A PRIVATE NOT-FOR-PROFIT, tax-exempt, or charitable organization

3 ☐ SELF-EMPLOYED in own NOT INCORPORATED business, professional practice, or farm

4 ☐ SELF-EMPLOYED in own INCORPORATED business, professional practice, or farm

5 ☐ Local GOVERNMENT (city, county, etc.)

6 ☐ State GOVERNMENT

7 ☐ U.S. military service, active duty or Commissioned Corps (e.g., USPHS, NOAA)

8 ☐ U.S. GOVERNMENT (civilian employee)

9 ☐ Other - *Specify*

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _

B6. Was your principal occupation during April 1988 the SAME as the principal occupation you reported for the week of April 15, 1993?

1 ☐ Yes, same occupation → *SKIP to B9, page 8*

2 ☐ No, different occupation or was not employed during the week of April 15, 1993

B7. *(IF NO)* **What kind of work were you doing on your principal job held during April 1988– that is, what was your occupation?** *Please be as specific as possible, including any area of specialization.*

Example: College Professor - Electrical engineering

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _

B8. Using the JOB CODES (pages 14-15) choose the code that BEST describes the work you were doing on your principal job during April 1988.

CODE

☐☐☐

B9. Did you have the SAME employer and SAME occupation in April 1988 and during the week of April 15, 1993?

1 ☐ Yes → *SKIP to B11*

2 ☐ No, not employed during the week of April 15, 1993 → *SKIP to B11*

3 ☐ No

B10. *(IF NO)* **Did these factors influence your decision to change employers or occupations between April 1988 and the week of April 15, 1993?**

Mark (X) Yes or No for each

	Yes	No
a. Pay, promotion opportunities	1 ☐	2 ☐
b. Working conditions (hours, equipment, working environment)	1 ☐	2 ☐
c. Job location	1 ☐	2 ☐
d. Change in career or professional interests	1 ☐	2 ☐
e. Family-related reasons	1 ☐	2 ☐
f. School-related reasons (e.g., returned to school, completed a degree)	1 ☐	2 ☐
g. Laid off or job terminated	1 ☐	2 ☐
h. Retired	1 ☐	2 ☐
i. Other - *Specify*	1 ☐	2 ☐

B11. Since receiving your first U.S. doctorate, have you ever spent 3 months or more conducting research in a country other than the United States?

1 ☐ Yes → *SKIP to Part C, page 9*

2 ☐ No

B12. *(IF NO)* **Would you ever consider conducting research in a country other than the United States?**

1 ☐ Yes

2 ☐ No

3 ☐ Does not apply: My work does not lend itself to conducting research in or outside the United States → *Skip to Part C, page 9*

B13. *(IF APPLIES)* **How much, if at all, would your interest in conducting research outside the U.S. increase with -**

Mark (X) one for each

	A Great Deal	Some-what	Not At All
a. Better financial support?	1 ☐	2 ☐	3 ☐
b. Better foreign language training opportunities?	1 ☐	2 ☐	3 ☐
c. Better access to information on foreign research opportunities (e.g., funding sources, research activities)?	1 ☐	2 ☐	3 ☐
d. Better sabbatical leave policy?	1 ☐	2 ☐	3 ☐
e. Family-related reasons?	1 ☐	2 ☐	3 ☐
f. Other - *Specify*	1 ☐	2 ☐	3 ☐

PART C - Other Work-Related Information

C1. How many years of professional work experience have you had?

If none or less than half a year, enter 0

Number of years

a. Full-time .... ___ ___ ___

b. Part-time .... ___ ___ ___

C2. During the past year, did you attend any professional society or association meetings or conferences?

Include regional, national, or international meetings

1☐ Yes

2☐ No

C3. To how many national or international professional societies or associations do you currently belong?

Number

___|___ OR ☐ NONE

C4. During the past year, did you attend any WORK-RELATED workshops, seminars, or other work-related training activities?

Do NOT include college courses - these will be discussed in PART D.

Do NOT include professional meetings unless you attended a special training session conducted at the meeting/conference.

1☐ Yes → GO to C5

2☐ No → *SKIP to Part D, page 10*

C5. (IF YES) During the past year, [illegible] following areas did you [illegible] workshops, seminars, or other [illegible] training activities?

Mark (X) Yes or No for each

	Yes	No
a. Management or supervisor training	1☐	2☐
b. Technical training in my occupational field	1☐	2☐
c. General professional training (e.g., public speaking, business writing)	1☐	2☐
d. Other work-related training - *Specify*	1☐	2☐

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

C6. For which of the following reasons did you attend training activities during the past year?

Mark (X) Yes or No for each

	Yes	No
a. To facilitate a change in my occupational field	1☐	2☐
b. To acquire FURTHER skills or knowledge in my occupational field	1☐	2☐
c. For licensure/certification	1☐	2☐
d. To increase opportunities for promotion/advancement/higher salary	1☐	2☐
e. To learn skills or knowledge needed for a recently acquired position	1☐	2☐
f. Required or expected by employer	1☐	2☐
g. Other - *Specify*	1☐	2☐

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

C7. What was your most [illegible] attending training activities? [illegible] APPROPRIATE ACTIVITY [illegible]

☐ Most IMPORTANT [illegible]

PART D - Education Since First U.S. Doctorate

D1. What is the highest degree, if any, that you have COMPLETED since receiving your first U.S. doctorate?

Mark (X) one

- 0☐ HAVE NOT COMPLETED A DEGREE SINCE (FIRST) DOCTORATE → *SKIP to D5*
- 1☐ MBA
- 2☐ Master's
- 3☐ Other doctorate
- 4☐ JD, LLB, LLM
- 5☐ M.D.
- 6☐ Other professional degree
- 7☐ Other degree - *Specify*

____

D2. What was your primary field of study?

☐ *Mark (X) this box if no primary field of study*

Primary field of study

____

____

D3. In what year was this degree awarded?

Year

19 __ __

D4. Were ANY of your school-related costs for completing this degree paid for by an employer?

- 1☐ Yes
- 2☐ No

D5. Between completing your most recent degree and the week of April 15, 1993, did you take any college or university courses?

- 1☐ Yes → *Go to D6*
- 2☐ No → *SKIP to Part E, page 11*

D6. *(IF YES)* **For which of the following reasons did you take college courses between completing your most recent degree and the week of April 15, 1993?**

Mark (X) Yes or No for each	Yes	No
a. To acquire further education before beginning a career	1☐	2☐
b. To prepare for graduate school	1☐	2☐
c. To facilitate a change in my academic or occupational field	1☐	2☐
d. To acquire FURTHER skills or knowledge in my academic or occupational field	1☐	2☐
e. For licensure/certification	1☐	2☐
f. To increase opportunities for promotion/advancement/higher salary	1☐	2☐
g. Required or expected by employer	1☐	2☐
h. For leisure/personal interest	1☐	2☐
i. Other- *Specify*	1☐	2☐

____

D7. Between completing your most recent degree and the week of April 15, 1993, what was your primary field of study?

☐ *Mark (X) this box if no primary field of study*

Primary field of study

____

____

D8. Were ANY of your school-related costs for taking college or university courses during this time paid for by an employer?

- 1☐ Yes
- 2☐ No

PART E - Background Information

E1. In what month and year were you born?

Month Year

___ 19 ___

E2. In what U.S. state or territory were you born?
If outside the United States, record country

U. S. state or territory

____

OR

Foreign country

____

E3. Did you live in a rural or farming community at any time prior to reaching the age of 18?

1☐ Yes
2☐ No

E4. What is the HIGHEST level of education COMPLETED by your parents?

Mark (X) one for each parent	**Father** (Step-father or male guardian)	**Mother** (Step-mother or female guardian)
Less than high school diploma	1☐	1☐
High school diploma or equivalent	2☐	2☐
Some college, vocational or trade school	3☐	3☐
Graduated from a 2-year college (Associate degree)	4☐	4☐
Graduated from a 4-year college (Bachelor's degree)	5☐	5☐
Some graduate or professional school	6☐	6☐
Master's degree or equivalent (including MBAs)	7☐	7☐
Ph.D., M.D., J.D., or other advanced degree	8☐	8☐
Don't know	9☐	9☐

E5. Are you of Hispanic origin or descent?

1☐ Yes
2☐ No → *SKIP to E7*

E6. ***(IF YES)* Which of the following categories BEST describes your Hispanic descent?**

If more than one category applies, please select the ONE you consider the most important part of your background.

Mark (X) one

1☐ Mexican, Mexican-American, Chicano
2☐ Puerto Rican
3☐ Cuban
4☐ Other Hispanic - *Specify*

____

E7. Are you -

Mark (X) one

1☐ White
2☐ Black/African American
3☐ Asian or Pacific Islander
4☐ American Indian, Alaskan Native (Eskimo, Aleut)
5☐ Other - *Specify*

____

E8. Are you -

1☐ Male
2☐ Female

E9. During the week of April 15, 1993, were you a -

Mark (X) one

U.S. Citizen

1☐ Native Born → *SKIP to E12*

2☐ Naturalized → *SKIP to E11*

Non-U.S. Citizen

3☐ With a Permanent U.S. Resident Visa

4☐ With a Temporary U.S. Resident Visa

5☐ Living outside the United States

E10. *(IF NON-U.S. CITIZEN)* Of which country are you a citizen?

Country

____

E11. When did you come to the United States to stay?

Year

19__ __ **OR** ☐ Never came to stay

E12. During the week of April 15, 1993, were you living in the United States or one of its territories, or were you living in another country?

1☐ United States

2☐ Another country

E13. During the week of April 15 were you -

Mark (X) one

1☐ Married → *GO to E14*

2☐ Widowed

3☐ Separated

4☐ Divorced

5☐ Never Married

→ *SKIP to E16*

E14. *(IF MARRIED)* During the week of April 15, was your spouse working for pay (or profit) at a full-time or part-time job?

1☐ Yes, full-time

2☐ Yes, part-time

3☐ No → *SKIP to E16*

E15. *(IF YES)* Did your spouse's duties on this job require expertise equivalent to at least a bachelor's degree in -

Mark (X) Yes or No for each	**Yes**	**No**
a. Engineering, computer science, math, or the natural sciences	1☐	2☐
b. The social sciences	1☐	2☐
c. Some other field - *Specify*	1☐	2☐

____

E16. During the week of April 15, did you have any children living with you as part of your family?

Only count children who lived with you at least 50 percent of the time. Students who board at school should be counted if they spent at least half of their vacation time with you.

1☐ Yes

2☐ No → *SKIP to E18, page 13*

E17. *(IF YES)* How many of these children living with you as part of your family were -

If no children in a category, enter 0	Number of children
a. Under the age of 6	_ _ _ _
b. Aged 6-11	_ _ _ _
c. Aged 12-17	_ _ _ _
d. 18 or older	_ _ _ _

[illegible] question is designed to help us better understand the [illegible]

E18. What is the USUAL degree of difficulty you have with -

[redacted]

	None	Slight	Moderate	Severe	Unable to Do
a. SEEING words or letters in ordinary newsprint (with glasses/contact lenses if you usually wear them)	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
b. HEARING what is normally said in conversation with another person (with hearing aid, if you usually wear one)	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
c. WALKING without assistance (human or mechanical) or using stairs	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
d. LIFTING or carrying something as heavy as 10 pounds, such as a bag of groceries	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

☐ *Mark (X) here if you answered "None" TO ALL ACTIVITIES in E18 then SKIP to E20*

E19. What is the earliest age at which you FIRST began experiencing ANY difficulties in any of these areas?

Age ☐☐ **OR** ☐ Since birth

E20. In case we need to clarify some of the information you have provided, please list a phone number where you can be reached.

DAYTIME Area Code ☐☐☐ – Number ☐☐☐ – ☐☐☐☐ EVENING Area Code ☐☐☐ – Number ☐☐☐ – ☐☐☐☐

E21. Since we are interested in how education and employment change over time, we may be recontacting you in 1995. To help us find you, please provide the name, address, and telephone number of a person who is likely to know where you can be reached. DO NOT INCLUDE SOMEONE WHO LIVES IN YOUR HOUSEHOLD.

As with all the information provided in this questionnaire, complete confidentiality will be provided. This person will only be contacted if we cannot find you in 1995.

Name

Number and Street

City/town State Zip Code

Country (if outside U.S.)

Area Code ☐☐☐ – Number ☐☐☐ – ☐☐☐☐

[illegible] information [illegible]

☐ [illegible] ☐ No - Please [illegible]

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JOB CODES

This JOB CODES list is ordered ALPHABETICALLY. The titles in bold type are broad job categories. To make sure you have found the BEST code, please review ALL broad categories before making your choice. If you cannot find the code that BEST describes your job, use the "OTHER" code under the most appropriate broad category in bold print. If none of the codes fits your job, use Code 500.

010 **Artists, Broadcasters, Editors, Entertainers, Public Relations Specialists, Writers**

Biological/Life Scientists
021 Agricultural and food scientists
022 Biochemists and biophysicists
023 Biological scientists (e.g., botanists, ecologists, zoologists)
024 Forestry, conservation scientists
025 Medical scientists (excluding practitioners)
026 Technologists and technicians in the biological/life sciences
027 OTHER biological/life scientists

Clerical/Administrative Support
031 Accounting clerks, bookkeepers
032 Secretaries, receptionists, typists
033 OTHER administrative (e.g., record clerks, telephone operators)

040 **Clergy and Other Religious Workers**

Computer Occupations
(Also see 173)
*** Computer engineers (See 087, 088 under Engineering)
051 Computer programmers (business, scientific, process control)
052 Computer system analysts
053 Computer scientists, except system analysts
054 Information systems scientists or analysts
055 OTHER computer, information science occupations

*** **Consultants** ***(select the code that comes closest to your usual area of consulting)***

070 **Counselors, Educational and Vocational**
(Also see 236)

Engineers, Architects, Surveyors
081 Architects
*** Engineers (Also see 100-103)
    082 Aeronautical, aerospace, astronautical
    083 Agricultural
    084 Bioengineering and biomedical
    085 Chemical
    086 Civil, including architectural and sanitary
    *** Engineers *(Also see 101-103)*
    087 Computer engineer - hardware
    088 Computer engineer - software
    089 Electrical, electronic
    090 Environmental
    091 Industrial
    092 Marine engineer or naval architect
    093 Materials or metallurgical
    094 Mechanical
    095 Mining or geological
    096 Nuclear
    097 Petroleum
    098 Sales
    099 Other engineers
*** Engineering Technologists and Technicians
    100 Electrical, electronic, industrial, mechanical
    101 Drafting occupations, including computer drafting
    102 Surveying and mapping
    103 OTHER engineering technologists and technicians
104 Surveyors

110 **Farmers, Foresters & Fishermen**

Health Occupations
111 Diagnosing/Treating Practitioners (e.g., dentists, optometrists, physicians, psychiatrists, podiatrists, surgeons, veterinarians)
112 Registered nurses, pharmacists, dieticians, therapists, physician assistants
113 Health Technologists & Technicians (e.g., dental hygienists, health record technologists/technicians, licensed practical nurses, medical or laboratory technicians, radiologic technologists/technicians)
114 OTHER health occupations

120 **Lawyers, Judges**

130 **Librarians, Archivists, Curators**

Managers, Executives, Administrators
(Also see 151-153)
141 Top and mid-level managers, executives, administrators (people who manage other managers)
*** All other managers, including the self-employed - Use the code that comes closest to the field you manage

Management-Related Occupations
(Also see 141)
151 Accountants, auditors, and other financial specialists
152 Personnel, training, and labor relations specialists
153 OTHER management related occupations

Mathematical Scientists
171 Actuaries
172 Mathematicians
173 Operations research analysts, modeling
174 Statisticians
175 Technologists and technicians in the mathematical sciences
176 OTHER mathematical scientists

Physical Scientists
191 Astronomers
192 Atmospheric and space scientists
193 Chemists, except biochemists
194 Geologists, including earth scientists
195 Oceanographers
196 Physicists
197 Technologists and technicians in the physical sciences
198 OTHER physical scientists

*** **Research Associates/Assistants**
(Select the code that comes closest to your field)

Sales and Marketing
200 Insurance, securities, real estate, and business services
201 Sales Occupations - Commodities Except Retail (e.g., industrial machinery/equipment/supplies, medical and dental equipment/supplies)
202 Sales Occupations - Retail (e.g., furnishings, clothing, motor vehicles, cosmetics)
203 OTHER marketing and sales occupations

Service Occupations, Except Health
(Also see 111-114)
221 Food Preparation and Service (e.g., cooks, waitresses, bartenders)
222 Protective services (e.g., fire fighters, police, guards)
223 OTHER service occupations, except health

Social Scientists
231 Anthropologists
232 Economists
233 Historians, science and technology
234 Historians, except science and technology
235 Political scientists
236 Psychologists, including clinical (Also see 070)
237 Sociologists
238 OTHER social scientists

240 **Social Workers**

Teachers/Professors
251 Pre-Kindergarten and kindergarten
252 Elementary
253 Secondary - computer, math, or sciences
254 Secondary - social sciences
255 Secondary - other subjects
256 Special education - primary and secondary
257 OTHER precollegiate area
*** Postsecondary
  271 Agriculture
  272 Art, Drama, and Music
  273 Biological Sciences
  274 Business Commerce and Marketing
  275 Chemistry
  276 Computer Science
  277 Earth, Environmental, and Marine Science
  278 Economics
  279 Education
  280 Engineering
  281 English
  282 Foreign Language
  283 History
  284 Home Economics
  285 Law
  286 Mathematical Sciences
  287 Medical Science
  288 Physical Education
  289 Physics
  290 Political Science
  291 Psychology
  292 Social Work
  293 Sociology
  294 Theology
  295 Trade and Industrial
  296 OTHER health specialties
  297 OTHER natural sciences
  298 OTHER social sciences
  299 OTHER Postsecondary

Other Professions
401 Construction trades, miners and well drillers
402 Mechanics and repairers
403 Precision/production occupations (e.g., metal workers, woodworkers, butchers, bakers, printing occupations, tailors, shoemakers, photographic process)
404 Operators and related occupations (e.g., machine set-up, machine operators and tenders, fabricators, assemblers)
405 Transportation/material moving occupations

500 Other Occupations (Not Listed)

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ARLINGTON, VA 22230

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